

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

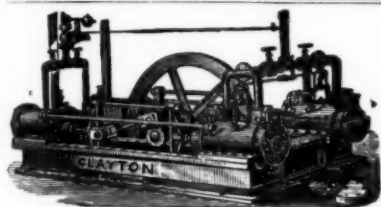
AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

VOL. 6. No. 21.
WEEKLY.

BALTIMORE, JANUARY 3, 1885.

\$3.00 PER ANNUM.
SINGLE COPIES, 10 CENTS.

—MANUFACTURERS OF— **JAS. SMITH & CO.** —DEALERS IN—
CARD CLOTHING Works, 413 to 421 Race St., Cor. of Crown. **Manufacturers' & Mill Supplies**
Of Every Description. **COTTON and WOOLEN MACHINERY.** Office & Store, 137 Market St., Philadelphia. Of Every Description.



Improved Duplex Air Compressor.

CLAYTON AIR COMPRESSORS

Rock Drills, Mining Pumps and General Mining Machinery,
For Catalogues, Estimates and Information, Address

CLAYTON STEAM PUMP WORKS, 45 & 47 York St., BROOKLYN, N. Y.

THOS. C. BASSHOR & CO.

—28 Light Street, BALTIMORE, MD.—

—MANUFACTURERS AND DEALERS IN—
Boilers, Engines, Pumps, Wrought-Iron Pipe, For Steam, Gas or Water.
Malleable and Cast Iron Steam Fittings,
Gas and Steam Fitters' Tools, Brass Work, Steam and Water Gauges, Steam and Hot-Water Heating Apparatus, &c.
SEND FOR ILLUSTRATED CATALOGUE.

ELEVATORS

STEPHEN A. MORSE

CARLTON M. WILLIAMS

EDWIN F. MORSE

CLEM & MORSE,

Manufacturers and Builders of HYDRAULIC, STEAM, BELT and HAND-POWER, PASSENGER and FREIGHT

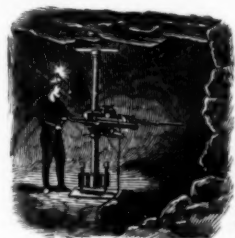
ELEVATORS

With most approved Safety Devices. Dumb-Waiters, Automatic Hatch-Doors, &c.

Sole owners of the right to apply the RUFE PATENT GOVERNOR to Elevators and Hoisting Machinery.

Send for Illustrated Circulars.

411 and 413 CHERRY STREET, PHILADELPHIA, PA. Branch Office, 108 Liberty Street, NEW YORK.



"ECLIPSE" "STRAIGHT LINE" ROCK DRILLS, AIR COMPRESSORS,

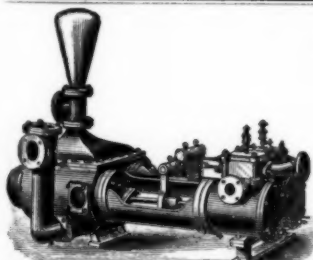
Machinery for Tunneling, Grading, Mining, Quarrying, etc.

TEN COMPLETE TUNNELING PLANTS FURNISHED FOR SOUTH PENNA. RAILROAD, PA.

FOR CATALOGUES, ESTIMATES, &c., ADDRESS,

INGERSOLL ROCK DRILL CO., 10 Park Place, N. Y.

MORTON, REED & CO., Agents, Baltimore.



The Worthington Duplex Steam Pumps,

Independent Condensers and Pumping Machinery of all kinds.

BOILER FEED, MINING, FIRE AND BREWERY PUMPS.

JACKSON & TYLER, Sole Agents, 16 and 18 S. Howard St., Baltimore, Machinery, Tools and Supplies.

SEND FOR PRICE-LISTS AND ESTIMATES.

LOWELL CARD CO.

J. CLARK, President.

S. S. GOULD Treasurer.

CARD CLOTHING

Of Every Description, LOWELL, MASS.

TEXTILE MACHINERY.

THE BRIDESBURG MANUFACTURING CO.

MACHINE BUILDERS,

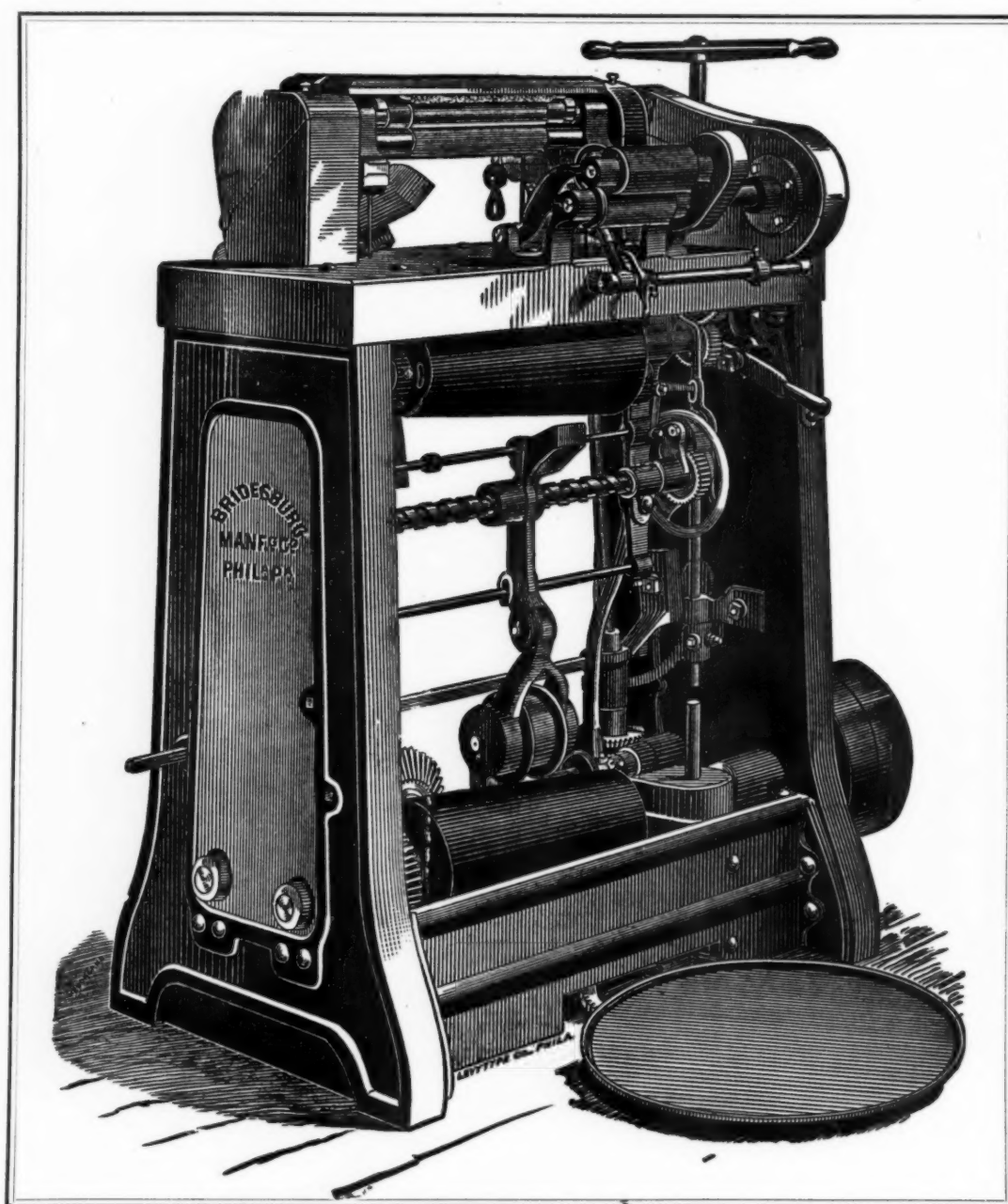
OFFICES, No. 201 CHESTNUT ST., PHILADELPHIA.

CARDING, SPINNING, WEAVING,

And all other Machinery used in Cotton and Woolen Factories.

—ALSO—

Builders of the Foss & Pevey Under-Flat and All-Iron ROLLER CARDS.



POWER SAVING, RING SPINNING,
 With Excelsior, Sawyer, Rabbeth, Birkinhead, or any of the approved PATENTED SPINDLES. The
 Excelsior Spindle drives the Bobbin positively and will run at any required velocity.
Self-Acting Mules for Wool,
 All Recent Additions and Improvements.

LOOMS

*For Cotton, Jean, and Worsted Goods, and Recently Improved and Superior Drop-Box Looms,
 with patent full lift, and full drop, skip-box motion and parallel pick,
 for Gingham and Dress Goods.*

STOCKTON BATES, President. JOHN ROMMEL, Jr., Vice-President. JOHN ROMMEL, 3d, Secretary and Treasurer.

Estimates for Mills and Plans for same, with all details, furnished by the best Mill Engineers at reasonable prices.

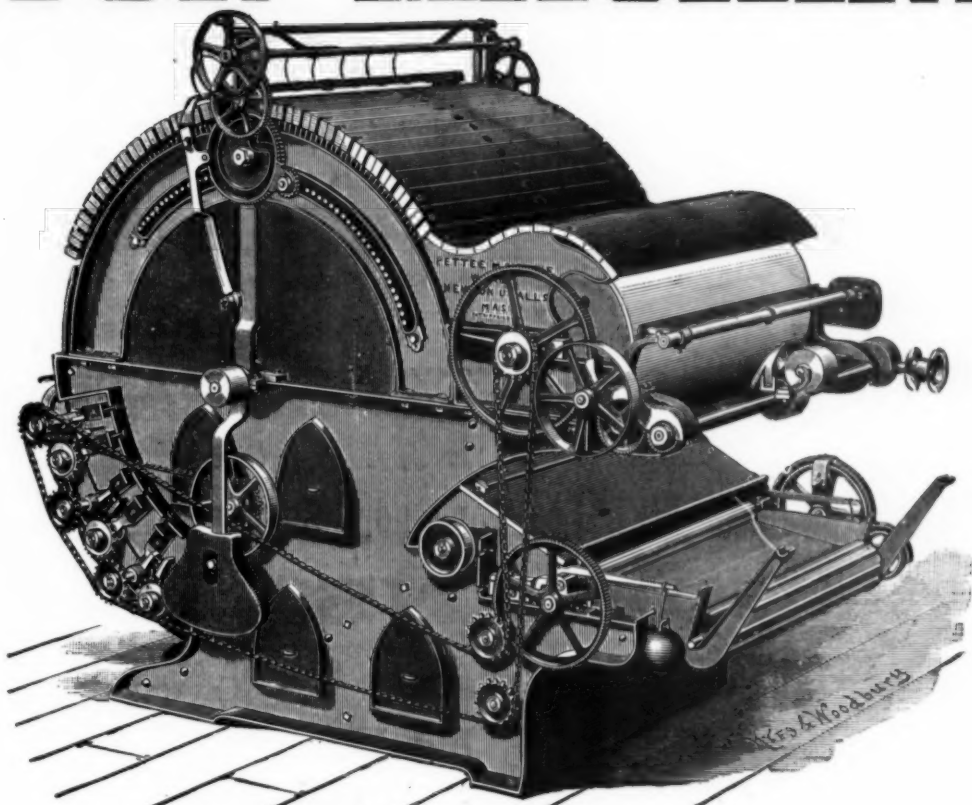
ESTABLISHED
IN 1831.

PETTEE MACHINE WORKS, Newton Upper Falls. Mass.

— BUILDERS OF —

COTTON MACHINERY.

Plans and Estimates Furnished.



Correspondence Solicited.

New Combination Cotton Card.

New Combination Cards, (48 in. diameter cylinder, 18 in. doffer,) Common Top Flat and Foss & Pevey Cards, Railway Heads, Railway Troughs, Drawing Frames; also *PATENT SPEEDERS* and *LOOMS* for goods from twenty-eight to sixty inches wide, plain or twilled.

HENRY BILLINGS, Prest.

R. B. DALY, Supt.

R. P. SNELLING, Treas., 40 Water St., Boston.

ESTABLISHED

POOLE & HUNT,

—1851—

Founders and Machinists.

POOLE & HUNT'S

LEFFEL * TURBINE * WATER * WHEEL,

Prices as Low as any other First-Class Wheel.

Machine * Moulded

MILL GEARING.

Our plant for the production of MACHINE-MOULDED MILL GEARING is unequalled in the country, and we are prepared to fill orders with dispatch and at GREAT SAVING IN COST OF PATTERNS.



Shafting, Pulleys, HANGERS, PEDESTALS.

SHAFTING, PULLEYS, HANGERS and COUPLINGS, of latest and most approved designs.

N. B.—Shipping facilities the best in all directions.

Send for Pamphlet. Send for Price-List.

List of our Gear-
ing Mailed on
Application.

POOLE & HUNT, BALTIMORE, MD.

SACO WATER-POWER MACHINE SHOP,

—BIDDEFORD, MAINE,—

Manufacturers of

COTTON * MACHINERY

OF THE MOST IMPROVED PATTERNS.

CARDS,

Cylinders, 36x36 and 36x30, with 20 tops and Self-Strippers and Railway Troughs. Union Cards, with workers, strippers and tops.

FINISHER RAILWAY HEADS.

DRAWING FRAMES, ANY LENGTH, WITH 3, 4 AND 5 LINES OF STEEL ROLLERS.

English Slubbers and Fly Frames, With Long or Short Bolsters.

—BOBBINS—

12x6, 11x5½, 10x5, 9x4½, 8x4, 7x3½, 6x3, and 5x2½.

RING SPINNING FRAMES, 2, 1½, 1⅝ AND 1½ INCH RINGS.

—TWISTERS.—

SELF-ACTING MULES, Parr, Sharp and Roberts' and Higgins' Pattern,

11, 15-16, and 14-inch Gauge.

S. W. RICHARDSON, Treasurer,

No. 1 Simmons Building, Boston.

JAS. H. McMULLAN, Agent,

Biddeford, Maine.

TIRRILL'S EQUALIZING GAS MACHINE!

Only Gas Machine

that makes

UNIFORM

GAS.

No Fire,

No Smoke,

No Smell.

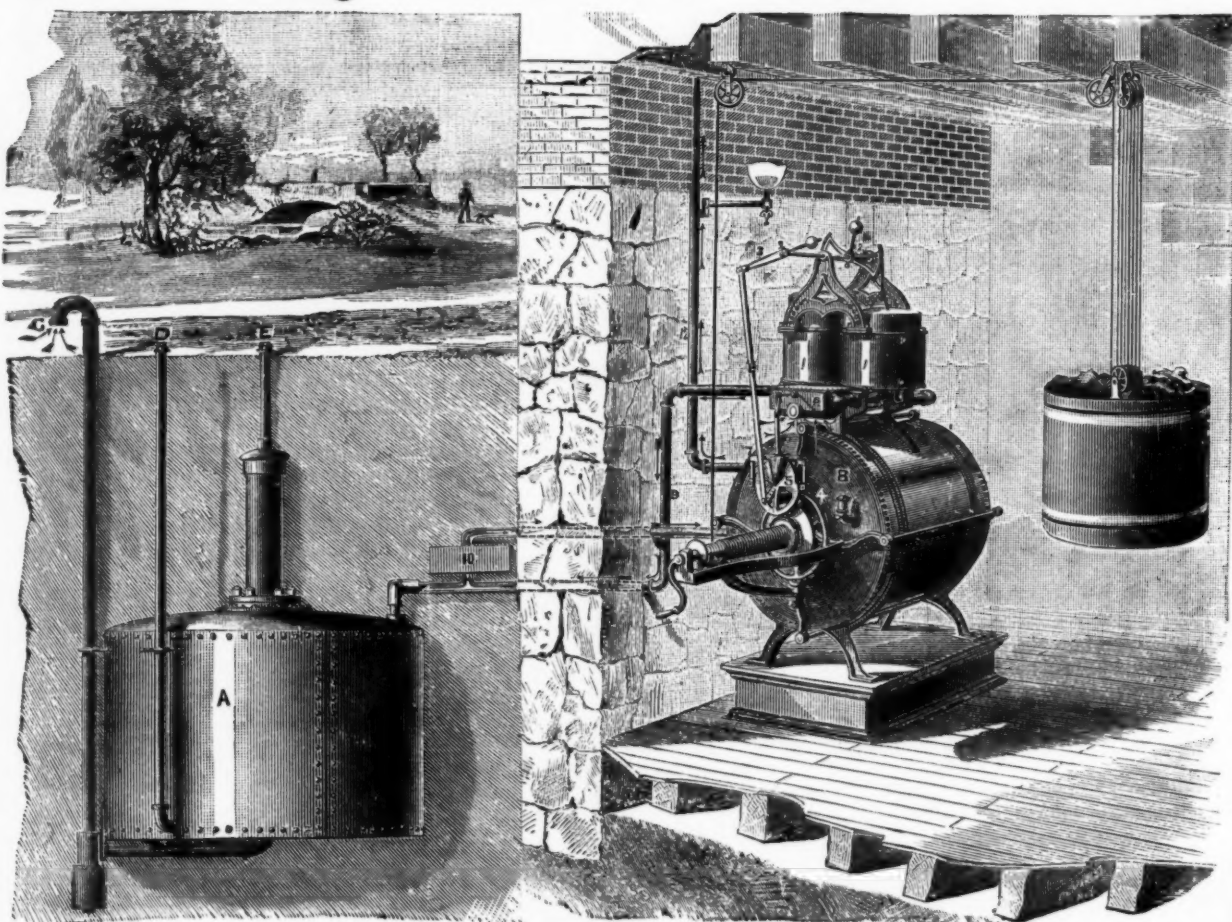
Plain Bat Wing

Burners only

Required.

GAS ALWAYS

Perfect.



Less than \$1.
Per Thousand
Feet.

Machines of any
CAPACITY.

Read Circulars
Before Buying.

Simple,
Perfect,
and Reliable.

Absolutely
Safe.

Approved by
Underwriters.

Read who en-
dorses Them.

FOR CIRCULAR AND FULL INFORMATION, ADDRESS:

TIRRILL'S GAS MACHINE CO., 39 Dey St., New York, N. Y.

HOWARD & BULLOUGH, & RILEY,

BUILDERS AND IMPORTERS OF

COTTON MACHINERY.

ALSO, IMPORTERS OF

Wool, Worsted and Flax Machinery and English Card Clothing. Hardened and Tempered Steel Wire a Specialty.

MILL ENGINEERS.

No. 19 PEARL STREET, BOSTON, MASS.

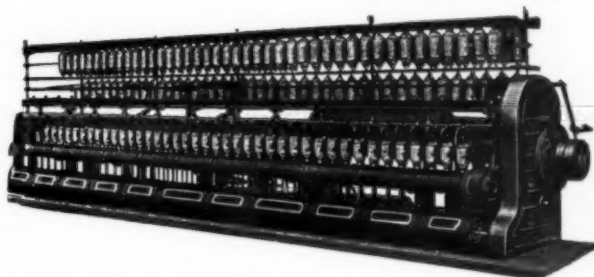
GREAT SUCCESS OF OUR
PATENT ELECTRIC STOP-MOTION,

ALREADY APPLIED TO OVER

9,000 DELIVERY HEADS
OF DRAWING, AND
62,000 INTERMEDIATE
ROVING SPINDLES.The quality of Sliver produced by our Frames
surpasses all others, and Waste, Single and Roller Laps
are prevented, and production increased.

Correspondence Solicited.

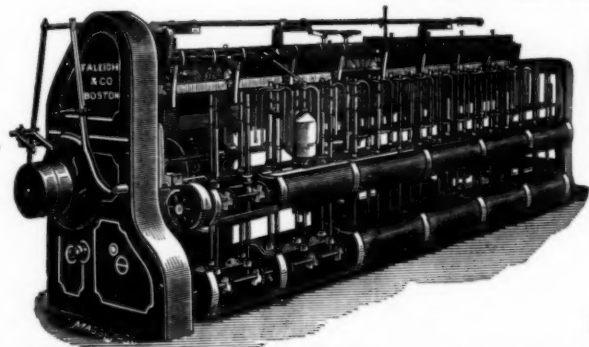
Send for Circulars.

SLUBBING AND ROVING FRAMES WITH LATEST AND BEST IMPROVEMENTS.

SPECIALTIES:

EXHAUST OPENERS, LAPPERS, (LORD'S
EVENERS,) IMPROVED ROLLER CARDS,
PRODUCE MORE AND MAKE LESS
WASTE THAN ANY OTHER.7,000 SELF-STOPPING WARPERS.
Already working with latest improvements.800 CYLINDER SLASHERS
Now at work in America alone.Patent and plain Spindle, Spinning and Twisting Frames,
Spoolers, Reels and Circular Warpings, Cloth Folders, Size Kettles
plain and Fancy Looms, Spindles, Flyers and Fluted Rolls.**F. A. LEIGH & CO.**
Importers of Mill Machinery,

—No. 40 WATER STREET, BOSTON, MASS.—



Openers, * Lappers, * Cards, * Drawing,

Slubbing and Roving Frames,

CARD CLOTHING, Etc.

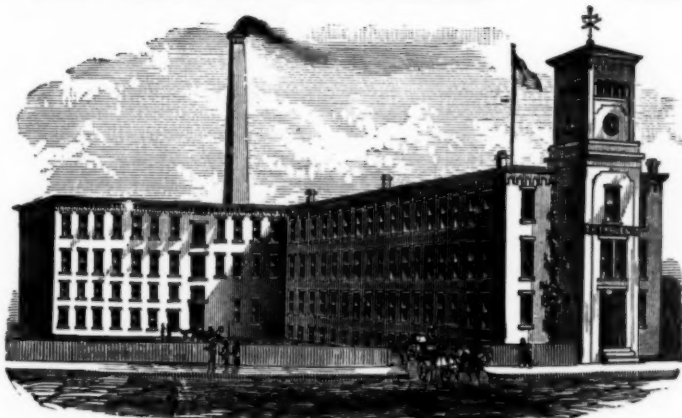
Correspondence Solicited. Send for Circulars.

CARD CLOTHING.

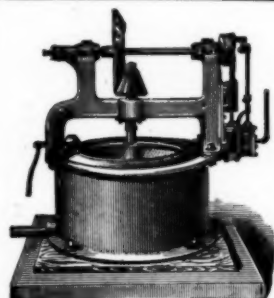
—Hardened and Tempered—

STEEL WIRE

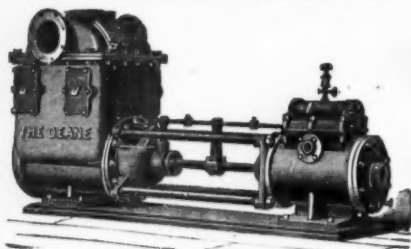
A Specialty.



ESTABLISHED 1786.

T. K. EARLE MANUF'G COMPANY,
Worcester, Mass.**Improved Centrifugal HYDRO-EXTRACTORS****Machine A.**For Silk Dyers,
with Vertical En-
gine on the side and
Cone Pulley Fric-
tion.**Machine B.**For Wool and
Cotton Dyers, with
direct-acting
Steam Engine.**Machine C.**Runs by Belt and
Friction Cones,
suitable for water-
power.Three Sizes of Each
Kind built by**W. P. UHLINGER, Nos. 26 to 48 East Canal St., Philadelphia, Pa.**

THE DEANE STEAM PUMP CO., HOLYOKE, MASS.



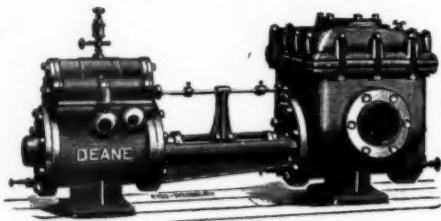
MANUFACTURE
Every variety of Pumping Machinery

VACUUM PUMPS FOR SUGAR WORK, ETC.

IRRIGATION PUMPS ARE SPECIALTIES.

Water Works Pumping Engines for Cities and Towns.

SEND FOR NEW ILLUSTRATED CATALOGUE.



RENDROCK POWDER COMP'Y,

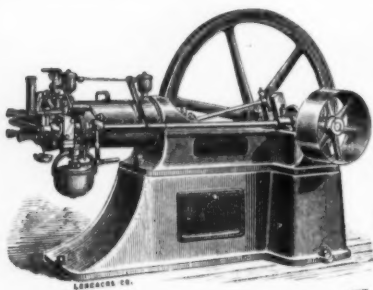
MANUFACTURER OF THE INGREDIENTS
OF THE NEW PATENT BLASTING POWDER:

RACKAROCK.

IT CONTAINS NEITHER GLYCERINE NOR
NITRO-GLYCERINE IN ANY FORM.

It Does Not Freeze. Can be shipped by express, railway or steamship lines. Neither of the two ingredients are explosive until combined, and when combined are safer than Dynamite. This explosive approximates Nitro-Glycerine in strength. Send for circulars to

RENDROCK POWDER CO., 23 Park Place, New York.



Over 14,000 in Use.

Otto Gas Engine

20 to 70 per ct. less Gas
consumption than
ANY other ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes: 1 to 25-horse power.

Branch Office, 214 Randolph St., Chicago. SCHLEICHER, SCHUMM & CO., N. E. cor. 33d and Walnut Sts., Philadelphia.

GEORGE DRAPER & SONS, Manufacturers of COTTON MACHINERY

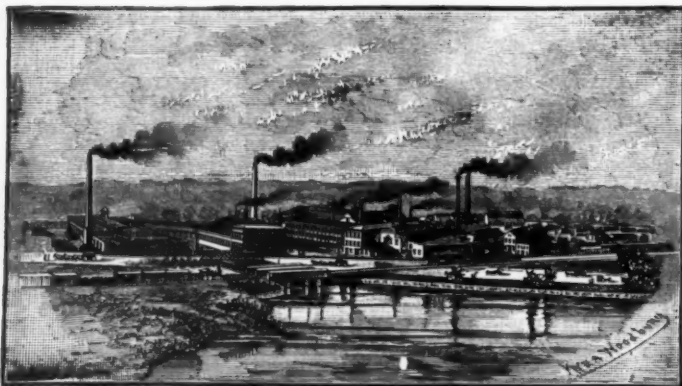
Telegraph Address and Railroad
Station, MILFORD, MASS. }

HOPEDALE, MASS.

Do not fail to visit the World's Exposition at New Orleans, La., and see in operation OUR NEW and IMPROVED MACHINERY for ROVING, SPINNING, SPOOLING, WARPING and TWISTING.

Washburn & Moen Manufacturing Co., Worcester, Mass.

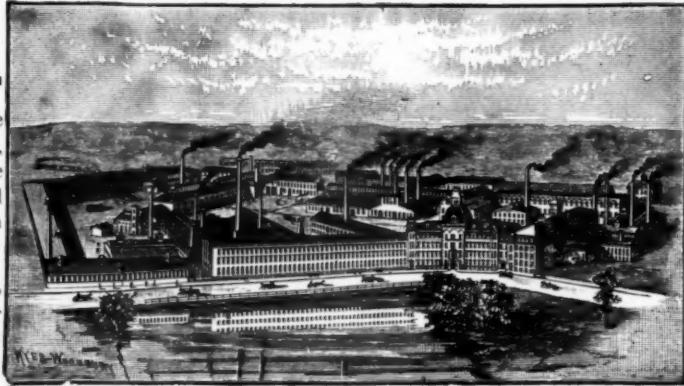
Wire Drawers, and Manufacturers of Iron and Steel Wire of Every Description.



Iron and Steel Telegraph
and Telephone Wire.

Patent Steel Wire Bale
Ties, Pump Chains,
Chain Wire, Steel Wire
for Springs, Needles and
Drills, Watch Main
Springs.

Send for Price-Lists,
Circulars and Descriptive
Pamphlets on Our
Specialties.



NEW YORK WAREHOUSE:

21 Cliff Street,

New York City.

GLIDDEN PATENT STEEL BARB WIRE.

The Best Fence Material in Use.

For Sale by Special Agents and Hardware

Proof against Fire, Wind and Flood.

Dealers in all Parts of the United States.

CHICAGO WAREHOUSE:

107 Lake Street,

Chicago, Illinois.

BALTIMORE Manufacturers' Record.

Published Every Saturday by
BIGSBY & EDMONDS.

R. H. Edmonds. J. W. Bigsby. Wm. E. Edmonds.

R. H. EDMONDS, EDITOR.

—OFFICE—

71 and 73 Exchange Place, Cor. Commerce St.,
—BALTIMORE—

NEW YORK BRANCH OFFICE:

Room 6, No. 118 Fulton Street,
J. W. BIGSBY, Resident Partner.

—SOUTHERN OFFICE, ATLANTA, GA.—
I. W. AVERY, Manager.

JAMES L. ELY,

Advertising Agent for New York and Vicinity.
Room 14, 29 Park Row, New York.

Price of Subscription Per Year in Advance:
(POSTAGE INCLUDED.)

TO UNITED STATES AND CANADA, \$3.00
OTHER COUNTRIES, — — — 4.50

ADVERTISING RATES:

One square (14 lines Agate, 1 inch) 1 time...\$ 1.50
" " " " " 4 " " " " 5.00
" " " " " 3 mos. " " " " 10.00
" " " " " 6 " " " " 18.00
" " " " " 1 year " " " " 32.00
For advertising on outside pages add 50 per cent. to
the above rates.
Reading Notices 50 cents per line each insertion.

BALTIMORE, JANUARY 3, 1885.

Marvelous Record of Progress.

A full list of all manufacturing and mining enterprises—numbering about two thousand, and having an aggregate capital stock of over \$100,000,000—organized in the Southern States during 1884, will be published in the MANUFACTURERS' RECORD of January 10th. This list will give the name, location and character of business of these 2,000 enterprises. The value of such a work as this cannot well be overestimated. It will show beyond the possibility of question, and more forcibly than it has ever before been presented, the marvelously rapid industrial development of the Southern States. The fact that during 1884 about 2,000 new manufacturing and mining enterprises have been organized in the South, is well calculated to impress the business world with the vast importance of that section in the near future as an industrial centre. The South may well be congratulated, that in a year of such general depression in business and especially in manufacturing interests, she has been able to so largely add to the number of her factories, mills and furnaces. It is not our custom to praise our own work, but we may be pardoned for saying that the next issue of the MANUFACTURERS' RECORD will be one of the most valuable papers—certainly of trade journals—ever issued in this country. Its influence will be wide reaching, and the good that it will accomplish for

the South is beyond computation. General statements of the South's progress, or glowing descriptions of its vast resources, may not carry conviction to everybody, but none can doubt that the South has indeed started on the road to prosperity, when they see not simply the unsupported statement of these things, but a detailed list—even the name and location—of about 2,000 new enterprises organized in one year.

The South in 1885.

Notwithstanding the general depression in the business world during the past year, the South made very substantial progress and enters upon the new year with brighter prospects than at any time in the last twenty years certainly, if not the brightest in her entire history. The great staple cotton, upon which so much of the South's business depends, was short in yield it is true, but this is partly counter-balanced by the high grade due to the excellent picking weather in the fall and to the higher value of cotton as compared with last year. The net results of the crop, counting the reduced cost of production owing to enforced economy on the part of planters in the spring, and the full prices now being received, will make the crop of 1884 very nearly equal in value to the producers to an ordinary full crop. Added to this is the greatly enlarged yield of cereals, fruits, vegetables, &c., a growing factor in the prosperity of the South. While the farmers have thus made good progress and are as a class more prosperous than in former years, the industrial interests of the South have increased more rapidly than ever before. The depression in trade and manufactures was of course seriously felt in the South as elsewhere, but despite this there was a remarkable growth in manufactures and an immense amount of money was invested in manufacturing and mining interests. In the building of new railroads and the improvement of old ones, great progress was also made.

The new year finds the Southern people fairly prosperous and thoroughly alive to the importance of developing their great resources. The South is moreover now attracting greater attention in other sections of the United States and in Europe than ever before, and while her own people are doing an immense amount of work in building new mills, furnaces and factories, outside capital is being invested there by the millions and even tens of millions. The present year promises to witness a remarkable activity in the development of the material interests of the South, and we feel safe in predicting that during 1885 more money will be put into new manufacturing and mining enterprises in the South than in any two preceding years.

Baltimore's Manufacturing Interests.

The Merchants and Manufacturers' Association of this city, through its secretary, Mr. John R. Bland, has compiled the statistics of the trade and manufactures of Baltimore. In this report the value of the products of Baltimore's manufactures is given as follows:

Agricultural implements.....	\$ 550,000
Boots and shoes.....	2,655,560
Brick and tile.....	1,084,921
Bread and steam bakeries.....	1,550,000
Clothiers.....	12,002,000
Carriage, coach and wagon....	905,650
Canning and fishing.....	16,424,546
Cotton manufactures.....	6,302,500
Candy, confections and fruit...	3,101,334
Distillers.....	2,000,000
Drugs, chemicals and patent medicines.....	10,519,618
Fertilizers.....	6,720,000
Furniture.....	3,246,000
Glass.....	1,683,200
Hardware.....	575,000
Hair.....	2715,320
Iron, steel, bell, brass and machinery.....	16,276,305
Looking glass and picture frames.....	610,590
Millers.....	3,255,000
Marble and stone works.....	1,891,340
Maltsters and brewers.....	2,313,250
Paints and oils.....	4,205,500
Pianos, organs, &c.....	1,400,000
Potteries—stone and earthenware.....	554,000
Printing, lithographing and publishing.....	2,157,134
Soap and candles.....	760,000
Saddlery, harness and whips...	1,018,207
Sashes, doors and blinds.....	1,136,250
Shirts, underwear and overalls..	3,540,000
Shot.....	609,375
Tin, copper and sheet iron.....	9,492,065
Tobacco manufactures.....	5,868,750
Woolens.....	651,079
Total.....	\$127,774,604

Business Improving in the South.

From all parts of the South reports come of a noticeable improvement in trade and manufactures, and we think it quite probable that, with the opening of the new year, business will become still more active in that section. As an illustration of what the Southern papers are saying of this improvement, we take the following extract from the Memphis Avalanche:

The appearances all indicate that the glut in the market for manufactured cotton goods is at an end. The Georgia mills report a big demand beginning with the first of this month. All Southern factories are refusing big orders ahead. A meeting of Georgia factory presidents was held in Augusta on the 8th of this month, and it was unanimously determined to advance the prices of goods one-quarter to a half cent. The Pioneer mills of this place are also reap the benefits of this advance. Mr. Booker, treasurer of this mill, stated to a reporter of the Avalanche that he had sold the entire stock of sheeting and shirting the past week at an advance of 1/4c per yard, equaling 1 1/2c per pound. In addition to this, there are orders on hand for all the time and other products the mill can produce for some time yet. Every day for the last week orders have been refused. Yesterday a heavy order, at an advance of 1/4c on the Georgia rates was refused, and every day improves the outlook.

Mr. B. F. Haller, treasurer and general manager of the Memphis cotton seed clearing-house, reports a brisk demand for cotton seed and an inadequate supply. Two of the mills—the Memphis Oil Company and the Gayoso Oil Company, who are in a syndicate with the Hanawer Oil Works and the City Oil Works—are not running on account of a lack of material, and the entire product of all the mills has been sold as closely as the rules of the mills will allow. The two

refining companies—the Chickasaw and the Hope—consume the bulk of the oil manufactured at this point. The price of cotton seed oil is somewhat less this year than last, owing to the competition of other greasy oils, but we manufacture and sell all the seed we can get.

In almost every branch of goods manufactured at Memphis, there is the same cheerful tone. In some the revival is not so pronounced, and has not progressed so far as in others, but the outlook is improving.

THE *Enterprise*, of Wytheville, Va., has published a special edition, with a view of showing up the marvellous wealth of the section of country tributary to that town. There is probably no other country in the world with greater mineral, timber, and agricultural resources in proportion to area than Southwest Virginia, and the *Enterprise* is laboring earnestly to attract the attention of the world to that section.

THE *Baltimore American*, with its usual enterprise, has issued an almanac for 1885 of over 100 pages, replete with valuable statistical and other information. It is moreover handsomely embellished with many beautiful illustrations.

To all our readers we wish a happy and prosperous new year, and to secure this there are two ways:

One is to subscribe to the MANUFACTURERS' RECORD.

And the other is to advertise in the MANUFACTURERS' RECORD.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. We invite those interested in the development of the South to make free use of our columns. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more,—so if you desire to attract immigration or capital, or if you know of an opening for profitable investment in manufacturing, mining or kindred pursuits, write us an account of it. It will be published free of cost.

MESSRS. L. H. LEE & BRO., of this city, agents for the well known Champion Binders, Reapers and Mowers, have issued a set of Christmas and New Year cards that are marvels of beauty.

Our readers will confer a favor upon our advertisers and upon us, as well as benefit themselves, if, whenever they write to anyone advertising in this paper, if it is only for a catalogue, they mention that "your advertisement was seen in the BALTIMORE MANUFACTURERS' RECORD." A careful compliance with this request will be much appreciated.

A Revolution in Fuel.

The wonderful success attending the introduction of natural gas into Pittsburgh and the small towns near there, and especially its immense value in manufactures, should cause a thorough investigation of the gas fields already discovered in different parts of the South. It is possible that natural gas can be found in the South as abundant as in Pennsylvania, and its value may be judged from the following extracts from a Pittsburgh letter in the Philadelphia Press:

Pittsburgh is passing through a transformation wonderful almost as the tales of the Arabian Knights. For months past gradually, and now almost swiftly, it is changing from a city of smoke and grime to one of the fairest and cleanest cities in the land. Day by day it less and less deserves its world-renowned title: "The Smoky City."

The agency in bringing about this remarkable change is natural gas and it has completely revolutionized some of its manufacturing methods. The general use of natural gas for fuel, instead of coal, will be of great advantage to Pittsburgh. The city will be vastly cleaner; no more coal; no more coal dust to blacken its streets; no more smoke and soot to begrime the buildings and darken the sky; no more sulphurous fumes to blight the trees, kill the grass and prevent flowers from blooming. Instead, its manufacturers will burn an odorless, colorless and inoffensive gas, that will produce no smoke or soot, but, in place thereof, two-and-three-quarter ounces of pure water for every pound of gas consumed.

WATER FROM FIRE.

A wonderful phenomenon is exhibited in the burning of natural gas. It is a fiery fountain from which water flows—pure, limpid water fresher than that which rushes down the mountain slope or gurgles from the spring. It is the liquid ashes resultant from the combustion of hydrogen. When Pittsburgh and the vicinity is fully supplied with gas, it will then produce from twelve to fifteen tons of water per day. Thus water will go from furnace stack as steam into the air, moisten the atmosphere, and fall as gentle dew to freshen and fructify every living thing.

Within a single year great strides have been taken here in the natural gas industry. In the city alone not less than \$6,000,000 are invested in practically applying the gas. Add to that its introduction as fuel in surrounding towns and the villages of adjoining counties, and it will make an additional \$4,000,000, or a grand total of \$10,000,000 invested in an industry in Western Pennsylvania that was practically unknown a few years ago. This sum embraces the cost of boring wells, labor and machinery requisite for the work, purchase of the land on which wells are located, purchase of right of way for pipe lines, increase in machinery of pipe mills for the manufacture of thousands of tons of pipes, the cost of these iron pipes, freight bills on the delivery of pipes, the wages of thousands of laborers in laying pipe lines, plumbing and pipe-fitting in mills, factories and dwellings, changes necessary for the adaptation of furnaces and stoves for the use of natural gas, and the manufacture of gas-fittings, gauges and meters. A year ago the subject was insignificant. To-day it ranks in importance with the iron, steel, glass and coal interests of Western Pennsylvania. Each and every one of them has become dependent on the resources of the new fuel.

THE FUEL OF THE FUTURE.

That the gas for heating purposes will eventually drive all other combustibles out of the field in Pittsburgh is inevitable. Already the consumption of gas, instead of coal, is enormous. It is estimated that from 15,000,000 to 20,000,000 cubic feet of gas is burned each day in Pittsburgh as fuel. Already ten iron and steel mills in the city and six in other parts of Western Pennsylvania, are using it in their puddling furnaces and

under their boilers. Within three months a dozen more mills will have it in operation, and every other manufacturing firm is eagerly awaiting the completion of the various pipe lines. Six glass factories in the city, and seven in near towns are using it. Every brewery in the city uses it, instead of coal. There has not yet been enough gas to spare for domestic purposes, and only a few dwellings, comparatively speaking, have been able to get it for their stoves and grates. Two of the largest hotels use it entirely in their kitchens. Safety inventions have been made and much of its dangerous possibilities averted. As a result householders are anxiously awaiting more gas.

Within an area of fifty miles about Pittsburgh at least a dozen small towns have discarded coal entirely, and every dwelling house has gas in its cook stove, parlor grate and bedroom fireplace. Among these places are Butler, Freeport, Clarion, Tarentum, Kittanning, Oil City, Wellsburg, Apollo and Murrysburg. There are no ashes to remove no sooty fireplaces to kindle in the morning. A thumb valve regulates the flame, brick-bats in the grate distribute it and retain the heat, and it may be kept burning low all night to have the house warm in the morning.

Already three iron mills have gas wells at their doors and other firms are boring private wells. A single well produces anywhere from 40,000 to 100,000 cubic feet of gas per day, so that the output of all private wells within Pittsburgh should be added to the grand total of the capacity of carrying companies to get a true estimate. These figures give some idea of the enormous possibilities spread out for Pittsburgh's future. Not only Pittsburgh, but, in one sense, the world will be benefited. With cheap fuel the iron and glass city expects to undersell all competitors. It has been found that the absence of sulphur from the gas makes better glass and better iron. The result is better iron and better glass than are made elsewhere and at cheaper prices.

A CHEAP FUEL.

The rivalry between the leading corporations is intense. The wealthiest capitalists of the city hold stock in them. The volume of their stock has gone up to fabulous sums, and as a result of the competition the price of natural gas to consumers has gone down to fifteen cents per 1000 feet—a little less than the price of coal. It is confidently expected that it will go to five cents per 1000 feet before long. But it is not alone in the price that gas is more economic as fuel than coal. It is in the saving of labor. No coal-heavers, ash-haulers or coal delivery on cars or wagons are required. The Pittsburgh Plate Glass Company, whose works are twenty miles up the Allegheny River, are saving \$1000 a day, or \$300,000 a year, by the use of gas. Their works are vast in size, and the output is immense. They are underselling the world with their plate glass. In every other branch of manufacture the saving is in the same proportion.

So very little is yet known about the natural gas resources, even by scientists, that no one can speak with certainty as to the life of a gas well. Two theories are held—first, that the supply of gas is inexhaustible; second, that the supply can and will be exhausted within twenty years. The former idea is that generally accepted and experience supports it in a measure. Dozens of wells in this part of the country have been burning since 1870 and a few since 1862, with an undiminished flow of gas.

We have not noticed that any one of the magazines announces a list of contributors approaching in ability, reputation and power to interest and instruct, that which *The Youth's Companion* announces of writers actually engaged for 1885. This year it offered \$3,000 in prizes for good short stories. It secured not only the stories, but many new writers whose work will be hereafter utilized. And the price, only \$1.75 a year, will cover a subscription from now until the close of the year 1885. Sample copies are mailed free, by the publishers, Perry Mason & Co., Boston.

Georgia's Marble Interests.

The vast marble quarries of Georgia, which are attracting so much attention, are destined to be a source of immense wealth to that State. We have lately given some particulars of the big marble cutting mill to be erected at Marietta, Ga., and from an interview with members of the company published in the Atlanta Constitution, we extract the following:

Mr. Clement said:

"We have closed and signed a contract with Messrs. Pulsifer, Mallory and Eager, representing a company that owns new patents for cutting marble. They contract to take from us not less than ten car loads of marble a day, and to build at once at Marietta a factory for cutting marble and set up engine and machinery. They have already begun work, I believe."

"Yes," said Mr. Eager. "We have 100 acres at Marietta on which we will probably put our works. Our plans for the mill are ready, and we are here to day to contract for 250,000 brick and the necessary lumber. Our mill will be 800 feet long. We have bought a Harris Corliss engine with 150 horse power. We will break ground for the mill some day this week."

Mr. Mallory interposed: "And we will put it right ahead. Our company owns many patents on marble cutting which will be worked here for the first time in commerce. These machines will do for marble just what the sewing machine has done for cloth. It takes a trained hand 11 hours to cut out a marble bowl and top for washstand. Mr. Clements has seen my machine do it in 16 minutes. With it I can cut brackets of marble that we can sell just as cheaply as wooden brackets of the same pattern can be sold. In cutting average marble work, one of my machines will do the work of 500 men. These gentlemen have seen them at actual work over and again. They will make such a revolution in marble cutting as the sewing machine made in ready-made clothing."

"I am a conservative business man," said Mr. Clements, "as you know, and I always speak deliberately and stand by my word. I have always told you we would amaze you by the wealth we would unfold here right under your eyes. I now tell you that we will control the marble market of the world from this city of Atlanta. We have no stock for sale. Not a share could be bought. We want no help. I simply tell you the truth, because you ask me. As for the capitol building, we do not want that, as I told the committee to-day when they sent for me. The company, represented by Mr. Pulsifer, Mr. Eager and Mr. Mallory, will take from us every three months enough marble to build the capitol. We ran the first train of cars over our railroad to our mines yesterday. Our cars carry 20 tons, and we will ship 4,000 cars over that road in the year 1885. Charge this remark up against me."

Work will be begun on the works at Marietta at once. Mr. Mallory said: "We shall keep about 200 men at work in the mill at Marietta. We shall spare neither men nor money in getting ready." Mr. F. H. Siddalls, of Philadelphia, is heavily interested in both companies, and is a leading counselor and capitalist in each. He says that in three years Atlanta will be the center of the most important marble interests on the American continent. Developments will be rapid from this date forward.

THE Charleston News and Courier, in a description of the immense phosphate works of Hume Bros. at Beaufort, S. C., in which \$1,000,000 are invested, in speaking of the large additions now being made, says: "The draughtsman and constructor of the works is Mr. F. H. Folsom, an accomplished millwright and mechanical engineer of Baltimore, Md."

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year or six months for \$1.50.

Opportunity for Enterprise.

When materials and labor are abundant and cheap, capital ties up its purse-strings, refuses to believe in the future, and regards as a personal affront any proposition looking toward the pushing of old or the inauguration of new enterprises; when things turn around—and they always do turn around—and prices begin to jump upward and material and labor to get scarce and costly, the men who pinched their eagles the tightest tumble over each other to invest. All manners of enterprises are pushed forward at a feverish rate and at a cost which, when the next down-turn comes, sweeps fortunes out of existence and brings forcibly home the line, "What fools these mortals be." Thus in perpetual rotation the extremes of activity and stagnation are precipitated, the hard times made harder, and the periods of activity—they can hardly be called truly prosperous—made more exciting and carried to more extravagant lengths. It is a mistaken idea that in dull times to shut up like an oyster and hide funds in a stocking or a safety deposit vault is conservatism. It is pessimistic folly. Many doubtless like to pose as conservative. These should remember that true conservatism never goes to extremes. There is axiomatic truth in the saw that "the longest lane has a turning," and it is almost as great a truth that whenever the price of staples descends below the cost of replacing them when consumed, they are cheap and it is a good time to buy. Moreover, in a new country like ours, when the shortest-sighted men can see with the certainty of prophecy that new railroads, new factories, and new enterprises of all kinds are going to be imperatively demanded in less than half a dozen years, it is folly to wait till the demand comes, to build at a high cost what may be anticipated at a low one. There is a double profit in building in times of depression. The construction is gotten cheap, and the activity which its building causes sets in motion those factors which cause an increase in value, since it is safe to say that every enterprise vigorously begun encourages another. This peculiarity of building when it costs too much and of sitting still when there is profit in building has been said to be peculiarly American. We believe it is human, rather. What one man wants with a vim his neighbor also wants, the world over. If one-third of a community should make rat-tails the great object of their desire, every pocket in the community would be found to contain a hoarded supply of caudal appendages. The reverse is equally true. Let every man therefore remember that upon his action depends in a manner also that of other men. If we all brace up and say there will be better times, they will come. There never was a better time to go into any legitimate enterprise where an enterprise is needed, and opportunities for such are not rare. If you buy for a dollar what cost more than a dollar and what cannot be made again for a dollar you cannot lose much unless you "lose your head" and rush to sacrifice. It is in this case only a question of time before you find yourself with a profit. The time is a question of human will in narrow limits. It may be hastened by hopeful views or delayed by croaking, but the end is certain, because it depends on human necessity. The product of to-day will have been consumed, and then, when new goods costing more than the dollar to make must be depended upon, the value of all goods will advance to the price of the new.

Any enterprise for which there is or will be room in the near future has an opportunity of profiting by low prices now.—Industrial World.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the BALTIMORE MANUFACTURERS' RECORD. We are always prepared to furnish proof of our claims as to circulation.

The Harrington Rotary Engine.

A new rotary engine involving principles heretofore unemployed and said to be capable of very high speed under economical circumstances is represented in perspective and in sectional detail in the cuts published herewith. As will be seen, it is compact in form, occupying but little floor space. It may be made of any size, double or single, and is intended for general use. For electric lighting and other purposes requiring high speed and freedom from oscillation it is said to be peculiarly adapted. The several parts are simple and are so made as to possess great strength and capacity to resist wear. Care has been taken to provide complete lubrication and to avoid friction. The chief characteristic or principle of this engine is the maintenance of an accurate

the instant of taking steam through a port from the valve-chamber *E*. Fig. 3 is a vertical section through the centre of Fig. 2 showing the relations of the discs *C*, and the abutment discs *B* and gear. The piston discs and gear are attached to the driving shaft *H*, and the abutment discs and gear are attached to the shaft *K*. These shafts, *H* and *K*, as above stated, run in taper phosphor-bronze bearings, which are adjustable for wear or other causes by the screw-caps *O*. The whole mechanism is kept rigidly in place by the flanged hub *r* bolted securely to the cylinder head *F*. These flanged heads project through the cylinder head, touching the piston disc, and thereby prevent any end motion of the shaft *H* or its attachments. The abutment discs and shaft are furnished with similar inwardly projecting flanged hubs, which are provided with a

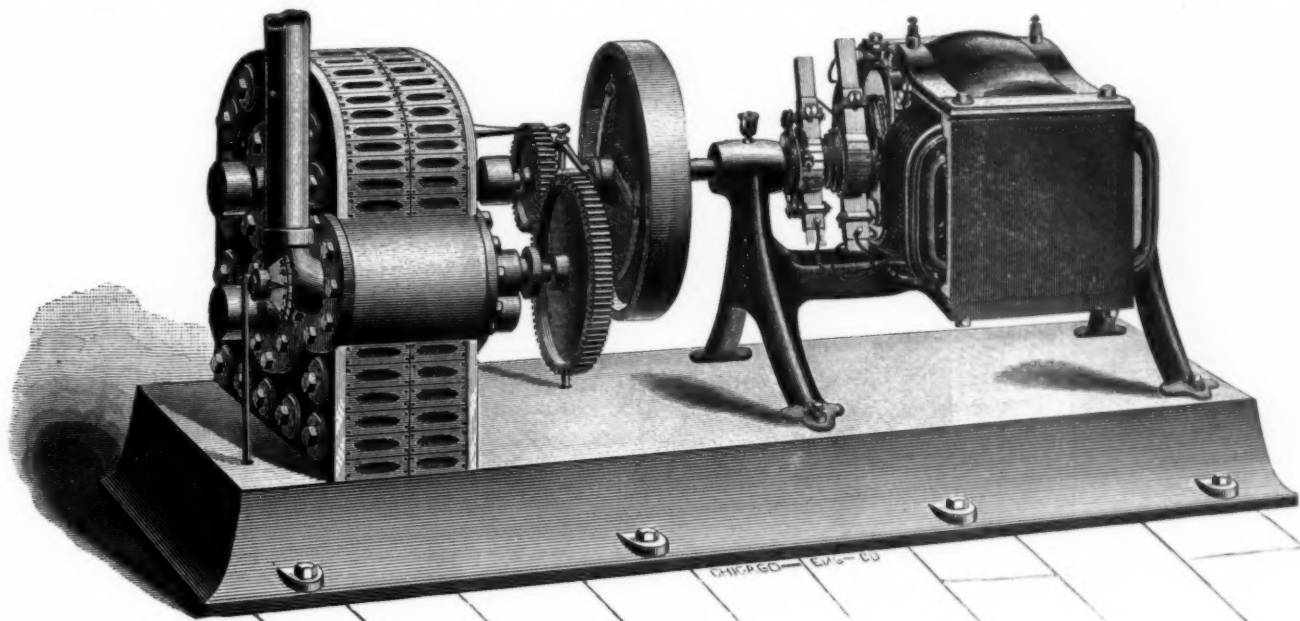
By this means is secured uniformity of motion under variable loads with variable boiler pressure. It also secures the advantage resulting from high initial and low terminal pressure, with small clearances and absence of compression, giving a large proportionate power and smooth action.

Expansion has been excellently provided for, the steam passing entirely around before entering the cylinder. These engines are mounted on a bed-plate which may be set on any floor without especial preparation therefor. The parts are all made interchangeable. A permanent indicator is provided, which shows the exact point of cut-off. The steam-port is exceptionally large, being one-fourth of the piston area. Reciprocating motion is entirely done away with. The steam is worked at the greatest leverage of the crank through the entire stroke.

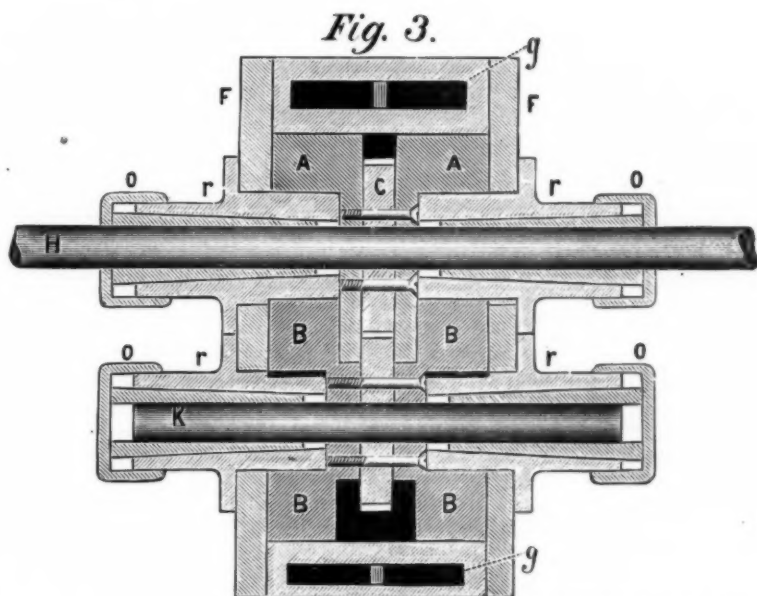
ing fifty-five pounds per square inch, and cutting off at from one-tenth to one-sixth of the stroke. It was taking steam from a large main-pipe, so there was no opportunity for an exact test of the amount of fuel used, but it is claimed that from a careful mathematical calculation it must have been developing one horse-power from three pounds of coal.

The inventor claims that, as his engine works the steam expansively, even better results would have been obtained had the engine been furnished steam at 100 pounds per square inch.

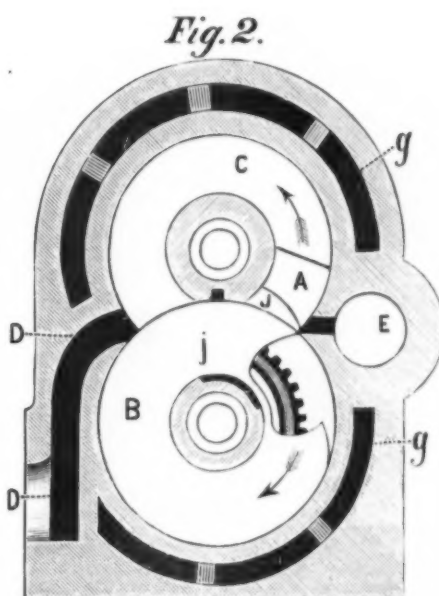
That this is a departure from the ordinary types of rotary engines that have been built, tested and rejected, is proven by the fact that all the seventeen claims made were allowed practically without amendment by the Patent Office at Washington. Patents



THE HARRINGTON ROTARY ENGINE.



THE HARRINGTON ROTARY ENGINE.



steam and mechanical balance and the avoidance of cross pressure. The power is applied directly to the work, the only friction being that of the steel shaft in phosphor-bronze bearings. Referring to the cuts, Fig. 1 shows the engine and an electric dynamo on the same shaft, all connecting mechanism being done away with and pounding obviated. There are but two parts to the engine (two discs which supply the place of all the ordinary mechanism) both of which are large, solid and durable. These discs have a bearing surface of several inches on each other preventing the passage of steam between them—a feature peculiar to this engine.

Fig. 2 represents an end elevation partly in section, showing the piston *A* and the abutment disc *B*, in the position assumed in

recess *I*, Fig. 2, on their periphery, located radially between the shaft *K* and the clearance space *J*. Into this recess steam is admitted—through an inlet in the cylinder head not shown in the cuts. By this means the shaft *K* is relieved of all side pressure. The exhaust-port, which is very large and relieves all back pressure, is shown at *D*. The pistons and discs are made to balance at the speed at which the engine is intended to run. The steam-valve, for which patent is pending is new in principle. It has a uniform rotating motion and, like the engine, is steam and mechanically balanced. The governor is located in the fly-wheel and actuates the automatic cut-off, with which it is directly connected, without the intervention of an eccentric, in such a way as to vary the cut-off without changing the point of admission.

Among the other chief advantages claimed for this engine are direct connection to machinery without belts, etc., impossibility of getting out of line, uniform crank leverage, capacity for working equally well slow or fast, etc. It has but one valve, which is operated by gear from the shaft, as shown, traveling at one-half the velocity of the piston.

It is said that with this engine a speed of 5,000 revolutions per minute is easily attainable, and that as a matter of fact and curiosity, a speed of 8,000 revolutions per minute has been obtained. An engine of this class was run at the Illinois Inter-State Exposition at Chicago for six weeks at a uniform speed of 1,050 revolutions per minute, furnishing the power for twenty-three electric lights, with a steam pressure not exceed-

have also been applied for in all foreign countries.

The motion under all circumstances being continuous, the shock of incessantly starting and stopping the masses of metal making up the engine is avoided, and the expenditure of power therein saved.

The Harrington Rotary Engine Company, 123 Clinton street, Chicago, are the owners and manufacturers.

THE BALTIMORE MANUFACTURERS' RECORD has a department devoted to information regarding new enterprises in the South. All who are interested in the commercial and railroad development of that sunny section of our Union should read this department weekly, for all new business enterprises, railroad projects and building schemes are noted therein.—*Railway Review*.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

OWING to the usual dullness of the holiday season, the list of new enterprises organized during the week is very short, but by the middle of January there will doubtless be decided activity in industrial matters at the South.

ALABAMA.

J. C. Tyson, Whitehall, Ala., whose saw mill was lately burned, has just finished rebuilding.

It is reported that the iron works to be built in Alabama by Gen. Sam. Thomas, president of the Thomas Iron Co., Philadelphia, as previously reported, will be located between Birmingham and Coketon, and that a town with gas and water works will be established there.

The Jefferson Steel and Iron Co., of Alabama, the incorporation of which was reported last week, has been organized by the Sloss Furnace Co., of Birmingham, Ala., and others, with a view of manufacturing iron and steel.

The machine shops of the Sheffield and Birmingham railroad, to be constructed during the next 12 months, are to be erected at Sheffield, Ala.

FLORIDA.

S. Bucki & Son, Ellaville, Fla., now building car works, will, it is reported, build a logging railroad.

GEORGIA.

The Augusta and Edgefield Railroad, previously reported as organized to build a road from Augusta, Ga., to Edgefield, S. C., has been incorporated by James Callison, D. R. Duriso, Thos. J. Adams, R. M. Mitchell, and others.

A. H. Powell and others, of Macon, Ga., propose to erect a large hotel.

KENTUCKY.

H. L. Lovell, D. C. Collins, H. L. Lovell, Jr., Wm. D. Collins, Joseph E. Mitchell and Chas. J. Davis, Covington, Ky., have organized the Lovell & Buffington Tobacco Co., capital \$300,000, to manufacture tobacco.

The Raplee Manufacturing Co., Louisville Ky., will rebuild their furniture factory burned last week.

J. M. Brent & Co., of Chicago, contemplate establishing a large creamery at Richmond, Ky.

H. H. Hand & Co., Morgan, Ky., have commenced the erection of a flour mill; will finish about July, 1885.

R. C. Hall, Russell Errett and others, Covington, Ky., have organized the Guide Printing and Publishing Co., capital \$100,000, to do printing, lithographing, &c.

MISSISSIPPI.

J. H. Morris, Jackson, Miss., whose ice factory is reported in this issue as burned, (loss \$10,000) will rebuild immediately.

NORTH CAROLINA.

The North State Mining Co., Greensboro, N. C., has been adding considerable machinery lately.

H. L. Freeman, Palmersville, N. C., previously reported, is establishing a shuttle block and bobbin factory.

J. R. Moore, Goldsboro, N. C., has commenced to rebuild his mill burned in June last.

J. A. White, Oxford, N. C., has purchased ground on which to erect a flour mill; will put in latest machinery.

The Acme Manufacturing, Wilmington, N. C., whose fertilizers works are reported in this issue as burned, will rebuild at once.

The Warm Springs Hotel, Warm Springs, N. C., burned this week, (loss \$150,000,) will be rebuilt on a larger scale.

SOUTH CAROLINA.

The South Carolina Legislature has appropriated \$75,000 towards the completion of the Statehouse.

A new phosphate company under the management of F. Brotherhood, has commenced the erection of large phosphate works near Beaufort, S. C. Another company is now being organized and will probably erect works in the spring near the same place.

A company has been incorporated at Greenwood, S. C., as the Greenwood Cotton Seed Oil Co.

The Nott Gold Mining Co., and the Chauga Lime Mining and Manufacturing Co., have been incorporated in South Carolina.

The Berkeley County Railway & Lumber Co., and M. Connel, of Charleston, S. C., have purchased right to manufacture pine oil under the Stanley patent and have established a factory near Charleston.

TENNESSEE.

Tadlock & Marrow, Sweetwater, Tenn., have purchased machinery for a saw mill which they will establish near there.

The Chattanooga Ice Company, Chattanooga, Tenn., have purchased a site and will erect factory. Have purchased machinery.

Dunavant, Kelley & Piper, Memphis, Tenn., who have received the contract for building the Memphis & Holly Springs Railroad, expect to commence grading at once.

Willingham & Co., of Columbus, Ga., previously reported as contemplating building a planing mill in Chattanooga, Tenn., have purchased a site in the latter city for \$10,000, and will remove their mill and sash and door factory from Columbus to Chattanooga. Will probably add some new machinery.

TEXAS.

The Montell Canning Co., Montell, Uvalde County, Texas, are erecting works for canning beef, mutton, &c.

E. S. Graham, of Graham, Young County, Texas, is negotiating for the sale of extensive coal property in that State.

VIRGINIA.

Preston Belvin, whose furniture factory at Richmond Va., was burned last week, (loss \$30,000) will rebuild at once.

C. T. Wamaling, Staunton, Va., will establish a steam laundry; has purchased part of machinery.

D. S. Jones, Williamsburg, Va., has nearly finished rebuilding his flour and grist mill. Has put in large amount of new machinery.

A \$50,000 tobacco manufacturing company is talked of in Roanoke, Va.

WEST VIRGINIA.

A foundry is to be established in Charleston, W. Va.

BURNED.

Flour mill of John Ervin, Lewisberg, (near) W. Va.

J. H. Morris' ice factory, Jackson, Miss.; loss \$10,000.

Factory of the Popplein Silicated Phosphate, Co., Baltimore; loss \$25,000, of which \$5,000 is on machinery.

Rainwater & Stearns grain elevator, Dallas, Texas. Loss \$60,000.

Saw mill of Ben. F. Pearasoll, near Owingsville, Ky.

Fertilizer works of the Acme Manufacturing Co., Wilmington, N. C. Loss \$20,000 Will rebuild.

A part of the foundry of W. H. Kehoe & Co., Savannah, Ga. Considerable machinery ruined. Will rebuild.

Mill and gin of T. L. Davidson, West Point, Ga. Loss \$2,500.

Wooden and willow ware works of E. W. Reed and Lewis' Sash and Blind Factory, Norfolk, Va.

IN this issue of the MANUFACTURERS' RECORD will be found an interesting letter from Mr. E. C. Gordon, one of the founders of the new town of Sheffield, Alabama. We have often expressed our faith in the growth of Sheffield as a great industrial centre, and it is with pleasure that we find the prospects of this new town as promising as Mr. Gordon shows them to be. Now that the severe business depression seems to be passing away, a more rapid development of the South's resources may be expected than has ever yet been seen, and Sheffield may be counted upon as destined to become a centre of great manufacturing and mining interests.

Georgia's New Mines.

The discovery of silver in Fort Mountain, in Murray county, Ga., has created great excitement in that section, and men are flocking there from all parts of the country. According to a correspondent of the Atlanta Constitution "the most valuable deposit yet known is on the land of Mr. Tyler, seven miles from Spring Place, Ga., and eighteen from Dalton, which is the nearest point to the railroad. A shaft six feet deep, four wide, and twenty long has been sunk under the superintendence of an old miner of seven years experience in the mines of the West.

He informed your correspondent that the "lead" was at least 1,500 feet wide, 300 deep and 28 miles long, being the same that is now worked at Duck Town, in Tennessee. Here, the old miner says, ore was found at five feet from the surface as rich as that obtained at 300 feet in the famous "Comstock," of Nevada, assaying from \$50 to \$2,000 per ton. It is said to be more advantageously situated than any mine in the West. It will drain itself to a depth of 600 feet; has a water supply sufficient to operate ten smelter stacks and all other machinery necessary. A railroad could be easily constructed to it from Tilton, a distance of about twenty miles. It is said that ore assaying only \$4 per ton could be worked with larger profit than \$10 ore in the West. Several large companies have sent their agents to see this mine, and only a few days since a Pennsylvania company offered Messrs. Tyler, Gilbert & Rose, the present owners of the mine, \$28,000 for it, which offer was refused."

Information Wanted.

PALMERSVILLE, STANLY CO., N. C.,
December 19, 1884.

Editor Manufacturers' Record:

DEAR SIR—We have begun sawing shuttle blocks, and as soon as we can get machines will begin to make bobbin heads. Will you be so kind as to give me any information regarding bobbin head trade and prices.

Yours truly,
H. L. FREEMAN.

WILLIAMSBURG, VA., Dec. 27, 1884.

DEAR SIR—Will you be kind enough, if you can, to give me the name of the party who has patented a shingle-making machine. I think he is a Baltimore man, and a doctor, I have heard. The patent has been gotten out within the last 12 months. And oblige, respectfully yours,

W. H. SWEANEY.

[The shingle machine to which you prefer, is probably the one now manufactured by the Scott Manufacturing Co., Baltimore. Any information desired regarding it can be obtained from that company.]

"ALDEN'S JUVENILE GEM" is the title of a new illustrated weekly paper for young people, the publication of which begins with the new year. It is a new departure of the prolific "Literary Revolution" and will be examined with interest by thousands of readers who have come to look to that enterprise almost exclusively for their reading matter. Its subscription price is only 75 cents a year, though it will rival the high priced magazines in the amount and quality of its attractions. A specimen copy will be sent to any applicant forwarding his address by postal card to the publisher, John B. Alden, 393 Pearl street, New York.

St. Louis Iron Market.

Specially reported by HOFFER & Co., Pig Iron and Iron Ore, No. 318 Olive Street.

ST. LOUIS, Dec. 29, 1884.

We have no change to note in the condition of the market, and prices remain about as last reported, viz:

HOT-BLAST CHARCOAL.
Missouri.....\$16 00@17 00
Southern..... 16 00@17 00
Ohio..... 20 00@22 00

COKE AND COAL.
Missouri..... 16 00@17 00
Southern..... 18 00@19 00
Ohio..... 20 00@22 00

MILL IRONS.
Red Short..... 15 50@16 00
Neutral..... 14 00@16 00

CAR-WHEEL AND MALLEABLE IRON.
Missouri..... 18 00@23 00
Southern..... 23 00@27 00
Ohio..... 23 00@30 00
Iron, par.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the BALTIMORE MANUFACTURERS' RECORD. We are always prepared to furnish proof of our claims as to circulation.

LOCKWOOD, GREENE & CO.

MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

New Adjustable Top Saw Table.

The accompanying engraving represents an entirely new machine, designed for a large variety of work. It is specially adapted to cabinet and furniture factories, pattern and general job shops, where a full class of work is required. The saw mandrel is hung on a casting swung on the countershaft, and may be raised and lowered by the lever in front. The table is fitted with rip and cross-cutting gauges of the most improved design. It may also be tilted to any angle up to 45°. Its various positions are indicated by the gauge at the right.

This machine is built throughout of the very best materials, and the workmanship is first-class. It will carry a 16-in. saw. The counter-shaft has tight and loose pulleys of 12-in. diameter, and 4-in. face. It should make 450 revolutions per minute. For further information we refer our readers to the

The Deane Steam Pumping Machinery.

Although Holyoke is specially noted as the paper-making center of the country and has more paper mills than any other city in the world, yet paper is not the only product in the manufacture of which Holyoke takes the lead. Among other industries of the city which are known far and wide may be mentioned that of the Deane Steam Pump works. This concern was organized in 1879 with a capital stock of \$200,000 and has steadily prospered since. Previous to the organizing of the company, however, the Deane Steam Pumps were largely sold in the markets, being then made at the Holyoke Machine Co.'s works. The great increase of business compelled the taking of separate shops, and large rooms were secured on Bigelow street, where the machine shop of the concern is. The foundry is located in a distinct building on Crescent street. The

creasing production had been necessary, the present company was incorporated. The works are located in this city, which affords superior advantages in water-power and manufacturing interests. These works consist of a well-arranged foundry, machine, erecting, testing and painting shops and other departments, many of course similar to those of any well-ordered machine manufactory.

In the machine shop a noticeable feature is the extensive use of templates, gauges and special tools to facilitate the work and make it uniform and interchangeable. In the testing department, complete steam and water connections are provided, and every machine before leaving the works, is there subjected to a rigid test, under all possible conditions. The main office of the company is in this city, with warehouses and branch offices in Boston, New York, Philadelphia, Chicago, and St. Louis.—Holyoke, Mass., Transcript.

Mining in Georgia.

Now that copious rains have fallen throughout the mining region in North Georg-

die and southern portions of our State are buhr stone, granite, asbestos, kaolin, heloy-site, phosphates and marl. Iron, coal and marble are being extensively mined in the northern portion of the State. \$25,000 worth of machinery is now being used to work the marble quarries in Pickens county. Granite and marble quarries are extensive and of excellent quality and will in the near future be much used in the construction of public and private buildings, monuments and for statuary purposes. The copper and nickel belts extending from North Carolina to Alabama, have been partially developed; gold veins and deposits have been found principally in the northeastern part of the State, and are worked extensively in the counties of Union, White, Lumpkin, Dawson and Cherokee. Many hundreds of thousands of dollars are invested in mines and fixtures. Many of the mines are yielding a large per centum of profit on the capital invested. Within a radius of seven miles around Dahlonega there are now in running order twenty gold quartz crushing mills, with an aggregate number of 400 stamps, with a capital invested in land, machinery and apparatus of over \$200,000. These mills afford employment to several hundred laborers and yield large profits on the capital invested. Recent and improved methods have made mining one of the leading and most profitable industries of the State. In 1837 a branch mint was established in Dahlonega for the assay and coinage of gold, which continued in operation until 1861, when it suspended. During its existence many millions of dollars in gold were coined.—Atlanta Constitution.

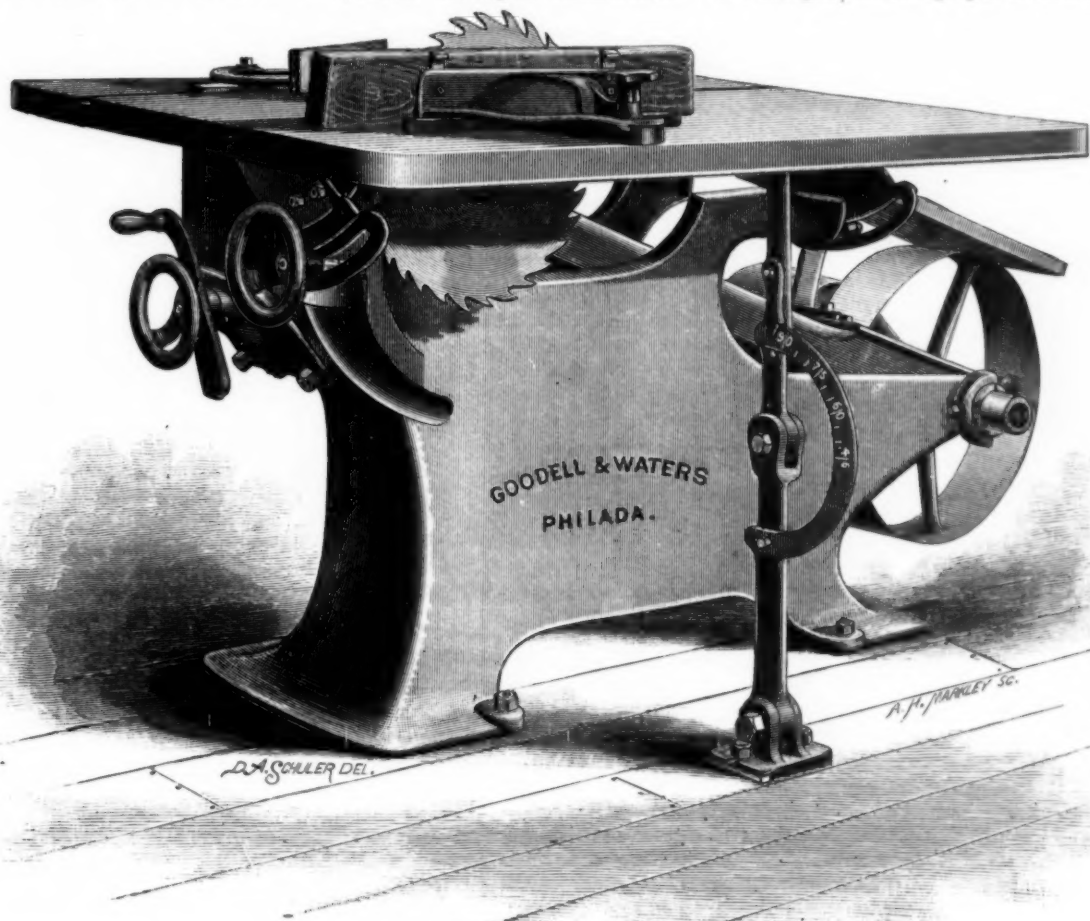
List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date Dec. 23, 1884. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C. Advice free.

Burkhead, Susan T., New Berne, N. C. Cor- set.....	309,760
Cummins, W. G., McMinnville, Tenn. Hold- back for vehicles.....	309,695
Cummins, Wm. G. and J. H., McMinnville, Tenn. Horse-detacher.....	309,694
Curlin, Seth, Covington, Tenn. Railway- switch.....	309,770
Davis, C. T., Baltimore, Md. Evaporator for hot-air registers.....	309,771
Davis, C. T., Baltimore, Md. Water-evapora- tor for stoves.....	309,772
Genese, David, Baltimore, Md. Dental sepa- rating-wedge.....	309,773
Hagerty, J. S., and J. S. Detrick, Baltimore Md. Tar for sheet-metal vessels.....	309,711
Ivens, E. M., New Orleans, La. Cotton- press.....	309,547
Kirchoff, W. P. and J. W., New Orleans, La. Process of an apparatus for the manufac- ture of confectionery.....	309,720
List, W. A., Wheeling, W. Va. Tin-seaming machine.....	309,551
Matthews, H. W., Baltimore, Md. Corn and cane harvesting machine.....	309,639
Michener, J. A., Selma, N. C. Fertilizer-dis- tributing attachment for carts.....	309,641
Parsons, J. A. H., Wheeling, W. Va. Photo- graphic-printing frame.....	309,736
Randolph, Richard, Rockville, Md. Car-cou- pling.....	309,564
Robinson, Isaiah, Springtown, Texas. Post- hole auger.....	309,803
Sanders, A. L., Falcon, Tenn. Car-coupling.....	309,653
Selden, Charles, Baltimore, Md. Overcoming static disturbances in telegraphy.....	309,572
Selden, Charles, Baltimore, Md. Quadruplex telegraph.....	309,573
Tise, C. H., Winston, N. C. Water-elevator.....	309,746
Vardell, W. B., Charleston, S. C. Grain-sep- arator.....	309,810
Weller, A. W., Hagerstown, Md. Plating- machine.....	309,752

Important to Southerners.

Persons arriving in New York via Cortlandt Street Ferry, by taking the 6th Avenue Elevated Train, corner Church and Cortlandt streets, can reach the Grand Union Hotel in 42d street, opposite Grand Central Depot, in twenty minutes, and save \$3 carriage hire. If en route to Saratoga or other summer resorts via Grand Central Depot, all baggage will be transferred from hotel to this depot free. 600 elegantly furnished rooms \$1 and upwards per day. Restaurant the best and cheapest in the city. Families can live better for less money at this hotel than at any other first-class hotel in the city. ‡



NEW ADJUSTABLE TOP SAW TABLE.

manufacturers, Messrs. Goodell & Waters, Philadelphia, Pa.

THE Thomas Bradford Co., of Cincinnati, Ohio, was established in the year 1840 and has been in business ever since. They are manufacturers of and dealers in general flour mill machinery and milling supplies. They contract to build new mills or to remodel old ones on either the stone or roller system. They are sole agents in Cincinnati for the old and well-known "Steven's roller mill."

Their portable mills for wheat, middlings and corn, are unsurpassed for the purposes for which they are intended. Then they make and have on sale belt tighteners, separators, smut machines, bran dusters, middlings purifiers, elevators, centrifugal reels, corn shellers, cleaners, flour packers, back lash springs, wheat heters, bolting cloths, bolting chests, etc., etc.

The company is a strong one and their guarantee is worth something. They will mail catalogues to all who write for them. Their address is Nos. 174, 176 and 178 West Second street, Cincinnati, Ohio.

NOTE If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year or six months for \$1.50.

company employ 225 men and manufacture 400 or 500 different kinds and sizes of power pumps. The officers of the company are William J. Harris, of New York, president, and Charles P. Deane treasurer, with the following board of directors: Stephen Holman, Emerson Gaylord, of Chicopee, George W. Prentiss, Theophilus Parsons, of Boston, J. W. Cumnock, of Chicopee, William J. Harris, of New York and Charles P. Deane. Mr. Deane has the sole active management and has given the company a reputation for enterprise which is a reflection of his constant personal attention. The volume of business the past year has been very fair, but prices have averaged low.

The Deane pump was brought prominently to notice about a score of years ago when arrangements were made for working the Deane patents on an extensive scale, and since that time the growth of the business has been steady and rapid.

The Deane valve mechanism secures an absolutely positive action in direct acting steam pumps by a remarkably small number of working parts and these of the simplest construction. To this successful solution of a difficult problem is due the unparalleled success of "The Deane."

In 1879, after various other changes for in-

ia, operations will be generally renewed. The wonderful revelations on Fort Mountain, if they should be sustained by future developments, will attract attention toward the mines of Georgia unequalled since the days when Nuckollville was in its prime. The Columbia, the Ivy, the Fish Trap, the Garnet and the Chestate mines have started and are now in operation. The Blast will start on the first day of January, and others no doubt will do the same. The story of gold mining in Georgia, as developed by the report of the committee on mines and mining in the legislature, is one of peculiar interest. Gold was first discovered, in the Cherokee purchase, within three miles of Dahlonega, in 1829, by Benjamin Parks, who now lives in that locality. This, and other discoveries, led to a rush of white people from various parts of Georgia and other States to that place. After the territory was surveyed and drawn for by lottery and settled up by an intelligent population, it was discovered that other valuable metals and minerals extended over a large area from Alabama to North Carolina. It is a settled fact that gold, silver, copper, nickel, mica, corundum, marble, granite, soapstone, slate, manganese and stonecoal exist in paying quantities in many localities. In the mid-

Bright Prospects for Sheffield.

What Mr. E. C. Gordon, One of the Founders of Alabama's new Town. Says of its Prospects.

INDIANA, ALABAMA & TEXAS R. R. CO.

OFFICE OF PRESIDENT.

E. C. GORDON, President.

CLARKSVILLE, TENN., Dec. 29, 1884.

Editor Manufacturers' Record, Baltimore:

In giving you some points of interest connected with the progress of Sheffield, it may be worth while to refresh your memory as to the origin of Sheffield, and briefly follow the history of the enterprise down to the present time.

A little more than twelve months ago my younger brother, W. S. Gordon, and myself secured about 2,700 acres of land with four miles of river front on the south side of the Tennessee river below the Muscle Shoals to almost opposite Florence, Ala., a little below it, a point practically at the head of navigation on the Tennessee river, and having invited some enterprising gentlemen in the South to join us, we organized the Sheffield Land, Iron & Coal Co., with a capital stock of \$500,000, the stock of the company representing not only the site upon which it was proposed to build the future city of Sheffield, but also owning 30,000 acres of very valuable iron and coal lands along the line of the proposed road to be built between Sheffield and Birmingham. We then undertook to interest some Nashville and New York parties, and, as the result of that effort, a number of gentlemen owing large interests in the East Tennessee, Virginia & Georgia Railroad and the Memphis & Charleston Railroad, organized a railroad company and a Construction Company and entered into a contract with us to build the railroad from Sheffield into the iron and coal fields, known as the Warrior region of Alabama. This railroad company was organized with Mr. Jerry Baxter, of Nashville, as president, and Gen. Samuel Thomas, president of the East Tennessee, Virginia & Georgia Railroad and of the Memphis & Charleston Road, as vice-president. Subscriptions were secured to the stock of the Construction Company to the extent of about \$700,000.

The construction of the railroad was begun early in February last and about 17 miles completed about the 1st of May. Work on this road was suspended about the middle of May, on account of the great financial panic which was thrust upon the country by the failure of the Metropolitan Bank and other large moneyed institutions about that time, and for the additional reason that the Construction Company were dissatisfied because they owned only 43 per cent. of the stock of the Sheffield Co., instead of a majority of the stock.

On the 8th, 9th, and 10th of May, at a public sale of lots in the proposed city of Sheffield, about 35 acres, divided up into town lots, were sold at public outcry for the sum aggregating about \$283,000. During the three days of sale, the company issued permits for the building of upwards of 20 manufacturing establishments of various kinds. Nearly all improvements were suspended when work on the railroad was discontinued. Negotiations have been for some time pending between the Sheffield Company and the Alabama Improvement Company for the resumption of work on the railroad, and for settling all questions at issue as to the proportion of Sheffield stock to be acquired and owned by the Alabama Improvement Company, which is the construction company building the Sheffield & Birmingham road. In the meantime the Construction Company has been reorganized, and Gen. Willard Warner, of the Tecumseh Iron Works, of Alabama, has been elected president, and it is understood that Mr. R. G. Hewey, of New York, will be the general manager of the Construction Company's interests. On the 17th of December last, all these questions at issue between the two companies were amicably adjusted, and

a contract signed between the two companies, by which the Alabama Improvement Company undertook to build 50 miles of road from Sheffield into the adjacent iron and coal fields in the direction of Birmingham, Alabama, within twelve months from the date of the contract, with the further obligation of continuing the construction of the road as rapidly as the means and credit of the Construction and Railroad Companies will admit of, until a connection is made with the Georgia Pacific Railroad, in Walker county, Alabama, about 80 miles from Sheffield, or an independent line built to Birmingham, a distance of 110 miles from Sheffield. The railroad shops of the Sheffield & Birmingham road are to be built in Sheffield. A subsidy was granted by the Sheffield Company also on the date this contract was signed with Mr. F. T. Ellis, of New York, by which the Sheffield Company agreed to donate 15 acres of land in the proposed city, upon which to build a one hundred ton iron furnace, the Sheffield Company also donating 500 acres of iron and coal lands along the line of the Sheffield & Birmingham railroad from which to mine ore and coal for the use of this furnace. The Sheffield Land, Iron and Coal Company are ready also to grant similar terms to any individual or corporation who will undertake to expend a similar sum of money in the erection of a furnace or other manufacturing establishment in Sheffield. They are also prepared to extend corresponding encouragement to any kind of manufacturing establishments, and the railroad and construction companies will give the most encouraging facilities in furnishing cheap material for constructing and operating the same.

The Sheffield Land, Coal and Iron Company propose at an early day to begin the erection of a 100-ton blast furnace, or to take stock in one or more furnaces to be built by others, the object being to secure the largest possible development with the means at the command of the company. The Sheffield Company have also about completed the temporary water-works, including the erection of engines and laying pipes, intended principally to furnish water to builders and pioneer manufacturing establishments. Mr. Habeler, of Tuscumbia, Alabama, is about completing a block of buildings, containing several stores, iron front, three stories high, the two upper stories of which will be used for hotel purposes. The Alabama Real Estate Company, of Mobile, have also in process of construction a block of brick buildings, and will soon begin the erection of a handsome hotel building. Two companies have been manufacturing brick in the place for some time past, and have on hand a large supply for the great demand they expect with the opening of spring, and although it has only been a few days since the announcement has been made that work on the railroad is to be resumed during the month of January next, a great number of the purchasers of lots at last spring's sales have declared their intention to commence the erection of buildings thereon with the opening of spring weather.

As to some of the advantages of Sheffield as an iron manufacturing center, it can be demonstrated that the raw material can be concentrated at Sheffield for a ton of iron as cheaply as at Birmingham or Anniston, Ala., and that when manufactured into pig iron, Sheffield has precisely, at present freight rates, \$2.55 per ton advantage over Birmingham to St. Louis. Not only has Sheffield an advantage of cheaper river transportation, but at present has the Sheffield & Birmingham road, the Memphis & Charleston road, and will in a short time be connected with the Louisville & Nashville system, by the extension of the Nashville & Florence railroad to a point opposite Sheffield on the north side of the river, this line being now within 20 miles of Sheffield. In addition to this, we hope that the Illinois Central road will extend its

Aberdeen branch from Aberdeen, Miss., on through the Warrior coal and iron fields to the Tennessee River at Sheffield, and ultimately on to Nashville, Tenn., on the north side. Besides this the Nashville, Chattanooga and St. Louis railroad is extending its Dickson branch from Dickson, Tenn., southward in the direction of Sheffield, and we hope at no distant day to see this connection also made.

As a point for the manufacture of all kinds of wood, there are few localities which have advantages equal to Sheffield. The Tennessee river bottoms, above and below, abound in the finest white oak, hickory and all kinds of hard wood, while the Sheffield and Birmingham road will penetrate the most extensive forests of yellow pine, which, together with the cheap coal, will secure the establishment of a great variety of wood-working manufactories.

The organization of the company is as follows: W. S. Gordon, President, Tuscumbia, Ala. A. H. Moses, Vice-President and Business Manager, Tuscumbia, Ala. J. F. Burke, Secretary, Atlanta, Ga. F. M. Coker, Treasurer, Atlanta, Ga.

Directors—W. S. Gordon, W. L. Chambers, C. A. Colyar, J. F. Burke, David Clifton, A. H. Moses, O. O. Nelson, H. B. Tompkins, D. M. Bane, and E. C. Gordon.

Yours truly,

E. C. GORDON.

W. J. VAN KIRK, Pensacola, Fla., has just issued a neat pamphlet of about 100 pages, entitled the "Gulf Stream," giving a large amount of information about Florida and also a long list of valuable properties for sale, including improved and unimproved lands, orange groves, farms, pine lands, &c.

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, Dec. 31, 1884.

The end of the old year and the beginning of a new is always a period of dullness except in the retail trade, business men devoting that time to an examination of accounts, stock-taking, &c. In view of this fact, no improvement in trade has been looked for until after the middle of the month, by which time it is hoped that increased activity will be felt in business generally.

Manufactured iron continues dull, and prices are very low, as previously quoted, but there are some prospects of more firmness. We quote as follows:

Ref. Bar Iron, 1 to 6 3/4 to 1.....	1.80	1.90
" " 1 to 4 1/2 to 1.....	1.80	1.90
" " 3/4 to 2, round and.....	1.80	1.90
square.....	1.80	1.90
Hoop Iron, 1 1/2 wide and upward.....	2 1/2	2 3/4
Band Iron, from 1 1/2 to 6 in. wide.....	2 1/2	2.60
Horseshoe Iron.....	3.20	3.30
Norway Nail Rods.....	5	5 1/2
Black Diamond Cast Steel.....	10	11
Machinery Steel.....	4 1/2	4 3/4
Spring Steel.....	3 1/2	4
Common Horse Nails.....	10	12
Railroad Spikes, 5 1/2 to 16.....	2.50	2.60

Pig iron meets with but little demand in this market at present, and we quote as before, viz:

Baltimore Charcoal Wheel Iron (all Baltimore ore).....	\$28 00@29 00
Virginia C. B. Charcoal Wheel Iron.....	28 00@—
Anthracite, No. 1.....	19 00@20 00
" " 2.....	18 00@19 00
" " 3.....	17 00@18 00
" " Mottled and White.....	16 00@17 00

HARDWARE.

For season goods the demand is very brisk and for general hardware it is moderately fair, fully equal to the expectations of dealers, this being a dull period of the year.

The Association of Tack Manufacturers has commenced making steel carpet tacks of 6 to 16 oz. inclusive, flat and oval heads and special uniform weights. Their prices are:

Blued.....	37 1/2	cts. per dozen.
Bright.....	37 1/2	"
Tinned.....	50	"
Coppered.....	50	"

The regular discount is 50%, subject to usual cash and quantity discounts, which

bring the prices for large lots very low. It is thought that this is possibly the way in which the Association will meet the competition of outside manufacturers.

Nails are very dull and prices continue low, \$2.00 being the nominal quotation for best quality.

The Scott Manufacturing Co., of this city, are so crowded as to be compelled to run at night to keep up with their orders, especially for their Safety and Artic Ice Creepers which they are shipping daily all over the country, orders from distant places like Canada, Montana, &c., being very numerous. This company has improved its solid cast-steel Artic Creepers by the addition of a malleable iron bush, which increases the number of threads in which the thumb-screw works, making it more secure. This improvement is much appreciated by the trade and by users. It is generally supposed that an ice creeper cannot be used when rubbers or Artic overshoes are worn, but the Artic Creeper can be attached to the heel of either of these without any trouble whatever, simply by fastening it across the heel of the rubber instead of lengthwise as usual. Thus the wearing of rubbers need not necessitate the giving up of ice creepers.

Mr. Arthur Emory, German street, Baltimore, has been appointed agent of the Buckeye Lawn Mowers, for which the claim is made that they are not only the best mowers made, but that they will be sold lower than any other first-class machine.

THE following circular has been received:
CINCINNATI, January, 1885.

Gentlemen—At the opening of another season, we beg leave to announce that we continue to manufacture the following varieties of iron roofing and siding, of different gauges and sizes:

"Old Style" V Crimp Roofing, "New Style" Standing Seam Roofing, "Roll and Cap" Roofing, Corrugated Roofing and Siding, and Curved Corrugated Roofings of different shapes. We shall also after the first of March put on the market a new "Metallic Shingle" which promises to excel anything heretofore manufactured.

We shall aim by the best of stock and workmanship to keep up the enviable reputation which our goods have earned; and having ample means and facilities for the transaction of our business, we now can offer you a choice from not only the best, but the largest variety of iron roofing made by any manufacturer in this country.

Iron roofing is to-day selling at lower figures than ever known in the history of the trade; bottom figures will be gladly quoted.

Thanking you for past favors, and hoping to hear from you during the coming year, we are
Yours truly,

W. G. HYNDMAN & CO.

Philadelphia Iron Market.

PHILADELPHIA, Dec. 29, 1884.

Pig iron.—Matters are extremely unsettled at present, and for causes heretofore dwelt upon, namely: the expected drop in the price of coal. The iron question at present is the coal question, and until the matter is settled, it is useless to say anything as to what iron will sell at hereafter. With the exception of twelve months in 1878-9, iron is selling lower than it has sold for thirty or forty years past. It makes but little difference what offers may be made now for large lots they will not be taken. The anthracite coal companies will meet in New York, this week, and settle on production and prices, if possible. Unusual difficulties stand in the way of any very early adjustment. The Pennsylvania company will not be likely to enter the combination, and in that event it is impossible to say what the outcome will be. A few days will clear up the uncertainty. Just at present, the outlook for the incoming year

PAINTS, OILS, &c.

PAINTS.

Black Lamp, coach painters.....	1 lb 20c
Black Lamp, ordinary.....	1 lb 4@6c
Black Ivory Drop, fair.....	12@15c
Black Ivory Drop, best.....	.20c
Black Paint, in oil.....	kegs, 6c; assorted cans, 9c
Blue Prussian, fair to best.....	35@40c
Blue Prussian, fair to best, in oil.....	35@40c
Blue Chinese, dry.....	.70c
Blue Ultramarine.....	15@25c
Brown, Spanish.....	.12c
Brown, Van Dyck.....	5@15c
Green, chrome.....	8@15c
Green, chrome, in oil.....	9@12@15c
Green, Paris, in oil.....	good, 20c; best, 25c
Green, Paris, in oil.....	1 lb 2 1/2c
Iron Paint, bright red.....	1 lb 2 1/2c
Iron Paint, brown.....	1 lb 1 1/2c
Iron Paint, purple.....	1 lb 3c
Iron Paint, ground in oil, bright red.....	1 lb 5 1/2c
Iron Paint, ground in oil, red.....	1 lb 5c
Iron Paint, ground in oil, brown.....	1 lb 4 1/2c
Iron Paint, ground in oil, purple.....	1 lb 6c
Linseed Oil, raw.....	.53c
Single Boiled.....	.55c
Double.....	.61c
Mineral Paints.....	2@4c
Orange Mineral.....	.10c
Red Lead, American.....	.6 1/2@7c
Red Venetian, (English) dry.....	\$1.50 to \$1.75
Red Venetian, in oil.....	assorted cans, 9c; kegs, 6c
Red Indian, dry.....	8@13c
Rose Pink.....	10@13c
Sienna, American, raw.....	.14c
Sienna, burnt.....	.4c
Sienna, burnt, in oil.....	8@15c
Sienna, raw.....	8@15c
Umber, burnt.....	4@8c
Umber, burnt, in oil.....	8@15c
Umber, raw.....	3 1/2@7 1/2c
Umber, raw, in oil.....	8@15c
Vermilion, Chinese.....	.90c
Vermilion, English.....	60@65c
Vermilion, American, common.....	.15c
White Lead, American, pure dry.....	6@6 1/2c
White Lead, American, pure in oil.....	6@6 1/2c
White, Paris, English, prime.....	in brls. 1 1/2@2c
Yellow Ochre, French.....	\$1.75
Yellow Ochre, French, in oil.....	ass't'd cans, 9c; kegs, 6c
Yellow Ochre, American.....	in brls., 1 1/2@1 3/4c
Yellow Chrome.....	8@18c
Yellow Chrome, in oil.....	9@12@18c
Zinc White, American, No. 1, dry.....	5@6c
Zinc White, American, No. 1, in oil.....	7@9c
Zinc White, French (Paris) dry.....	9@12c
Zinc White, French in oil.....	10@14c

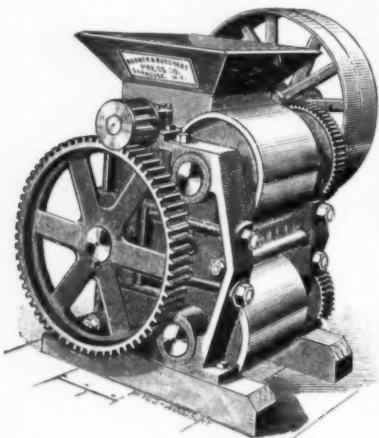
OILS.

Bleached W. Sperm oil.....	1 00@1 01
Nat.....	93@ 98
E. W. Elephant oil.....	73@ 78
" " Whale oil.....	70@ 72
Prime Lard oil.....	52@ 65
Extra No. 1 Lard oil.....	60@ 65
Lubricating oils.....	12@ 25
Miners' oil.....	45@ 55
W. Pressed Fish oil.....	40@ 55
Neatsfoot oil.....	65@ 80
Steam-refined Cylinder oil.....	40@ 55
Best Filtered.....	65@ 80
Signal oil.....	55@ 65
Paraffine.....	12@ 20

SUNDRIES.

Benzine.....	1 gal., 8@10c
Turpentine.....	1 gal., 33 1/2 c
Chalk, block.....	7@ 7c
Dryer patent Am'n.....	ass't'd cans, 8c; keg, 7c
Frostings.....	.40c
Glue, white.....	18@36c
Glue, sheet.....	14@20c
Glue, ordinary.....	9@12
Glaziers' Points, zinc.....	.8c
Gum, Copal.....	.36c
Gum, Damar.....	.25c

CRUSHERS.



Pressers, Heaters, Hullers, &c.

For Small or Medium-size

COTTON-SEED OIL MILLS.

Can furnish estimates for a complete mill or any part thereof. Also BALING PRESSES for Cotton, Woolen or Paper factories.

Lard, Tallow Oleo and Paraffine Presses.
Correspondence Solicited.Boomer & Boschert Press Co., Syracuse, N. Y.
Or 219 Fulton St., New York City.

THE THOMAS BRADFORD CO.

174, 176 & 178 West Second St.

CINCINNATI, OHIO.

—MANUFACTURERS OF—

French Burrs, Portable Upper and Under Running Mills, and all sorts of Mill Machinery. Send for Catalogue.

WESTINGHOUSE,
CHURCH, KERR & CO

Contracting and Consulting

Mechanical
Engineers.

Design and furnish Everything

Pertaining to the

Generation, Transmission and
Application of Power.

17 Cortlandt Street, NEW YORK.

SHEET IRON

ROOFING.

Northrop's Patent Cap Seam
Iron Roofing.No rivets, screws or nails through the sheets.
Easily applied and perfectly watertight.

CRIMPED IRONS

of various styles for Roofing and Siding.

IRON CEILING.

ORNAMENTAL. DURABLE. FIRE-PROOF.

A. NORTHROP & CO.

97 First Avenue,

PITTSBURGH, PA.

Derby Roll Top Desks.

—Best Office Desk in the World.—



Cherry, Walnut, Oak, Ash and Mahogany.

Send for Illustrated Catalogue.

DERBY & KILMER DESK CO.

55 Charlestown St., Boston, Mass.

THE BRADSTREET

Mercantile Agency

HAS NOW BEEN

Under its present successful management for
the past seven years.And during that time its business has more than
trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and if in need of an Agency, to test its ability to serve you.

CHAS. F. CLARK, President.

Baltimore Office,—American Building,

H. KERSHAW, Supt.

Valuable Florida Property For Sale.

MUST BE SOLD FOR DIVISION.

A Fine Orange Grove.

The most desirable piece of property on Indian River, in South Florida, is now offered for sale, in order to bring about a division, one of the owners having died. The locality is famous for producing the best, the largest, and most delicious sweet oranges, pineapples and other tropical fruits, as well as the most succulent vegetables of all kinds in the State. The property contains over 400 acres of the most fertile and productive lands to be found in tropical Florida or elsewhere.

There are about twenty-five acres set in orange trees, which are now in full bearing. The tract is about equally divided by a creek, which affords an abundance of fresh water. Ducks, geese, and game of all sorts, as well as fish exist in inexhaustible numbers. Near the mouth of the creek, in Indian River, are immense beds of the finest and largest, as well as best flavored oysters in the United States. This tract fronts nearly one mile on Indian River, the banks being very high and gradually sloping back from the river, affording the best protection from the winds from off the Atlantic ocean, which are not very frequent in that latitude. The river at this point is two and a half miles wide. From the top of a very high mound in the grove the ocean can be seen. Connected with this grove is a nursery of about ten thousand seedling orange trees, from two to three years old, in a healthy and thrifty condition. These trees sell readily for \$1.25 each.

On the south side of the creek, which is two hundred yards wide, where it empties into Indian river, are about two hundred acres of the finest pineapple land in Florida. The entire tract can be easily divided up into smaller farms if a company should purchase for that purpose. The locality is entirely free from malarial diseases, and is without doubt the most attractive section of Florida.

ONE of the BEST ORANGE GROVES in SOUTH FLORIDA.

This property is situated on the famous Lake Jessup, ten miles from Sanford, and one and a half from Salary's Wharf, and consists of 16 acres of pine land on which there is a five acre grove, just coming into bearing. The improvements—A new framed dwelling house, with brick chimneys, kitchen and all necessary out-houses. Are all new. This is the home place. In a half mile of the dwelling, and nearer the wharf, is the main grove, now in full bearing, which consists of 30 acres of first-class hummock land, with about twenty acres set in the grove, which is in a high state of cultivation. The trees were set in 1868—sixteen years ago. The present crop of oranges was sold at the grove, the purchaser gathering them, at \$2.00 per box, and it is estimated at about 2,000 boxes. It is reasonable to suppose that the crop for the present year will be double that of the past year, as the grove has doubled its bearing for several successive years, and by actual observation it has been demonstrated that orange trees continue to increase their bearing up to 40 or even 50 years when well and properly cultivated. In addition, if desired, can be bought with the above described property, 35 acres of very rich black hummock, in half a mile of Salary's Wharf, which is high and dry. These properties can be bought at a very low figure, less than half their present real value.

TWO SPLENDID ORANGE GROVES NEARLY JOINING EACH OTHER,

At City Point—Near Rockledge on Indian River, at Exceeding Low Figures.

One grove is in a square of ten acres immediately on the river front, with a strip of land running back, six acres long by one acre, and eighteen feet wide, containing over 17 acres, on which there is a grove in bearing of 1 1/2 acres, and 10 acres set in a young grove, that will soon come into bearing. This grove is near the river bank.

The other tract contains 46 acres, and has a river frontage of one acre wide, running back, eight acres long, to where there is an excellent grove of 17 acres, that will soon come into bearing, with one and a half acres in full bearing; and on the river front, 40 well-developed trees, in full bearing.

The whole of these tracts is of the most excellent quality of hummock lands, and is well adapted to the growing of every kind of tropical fruits and vegetables. Good society. Healthfulness unexcelled by any other section of the country. One or both tracts will be sold. FOR PARTICULARS, ADDRESS

BIGSBY & EDMONDS, Baltimore.

GUILD & GARRISON,

Steam Pumps,

Vacuum Pumps and Compressors,

BROOKLYN, NEW YORK.

SEND FOR ILLUSTRATED CATALOGUE.

REMINGTON STANDARD TYPE-WRITER

THE STANDARD WRITING MACHINE OF THE WORLD.



It much more than takes the place of the pen, as it does the work of two or three penmen, and much more neatly and legibly. The business man will appreciate this saving of valuable time. Dictate your correspondence etc., to a Type-Writer operator and have your time and strength for other matters. (Perfect press copies obtained in same way as of pen writing.)

Again the Type-Writer is well-nigh indispensable to overworked professional men. It is a complete relief from the strain of pen-writing. Lawyers have their papers written with the Type-Writer. Many copies can be made at one time, (absolute duplicates) thus multiplying speed.

Clergymen write their sermons with the Type-Writer, and hence can read them in a dim light the manipulation becomes purely mechanical, and owing to its greater speed the mind does not lose its freshest and best thoughts, as when waiting for the slow pen to catch up. In use throughout the world. Perfect satisfaction guaranteed. Send for illustrated pamphlet, with testimonials.

WYCKOFF, SEAMANS & BENEDICT, 281 & 283 Broadway, New York.

THE NEW SOUTH.

An Accurate and Comprehensive Description of the Southern States, Noting each State Separately, and Giving their Distinctive Features and Most Salient Characteristics; Presenting a Vivid and Vigorous Picture of their Resources and Attractions, their Present Condition and Vast Possibilities.

BY COL. M. B. HILLYARD, NEW ORLEANS, LA.

Published by THE MANUFACTURERS' RECORD, Baltimore, Md.

➤PROSPECTUS.◀

The publishers of the MANUFACTURERS' RECORD, in furtherance of their aim to lead in matters promotive of the material interests of the South, beg to state that they will shortly issue a work entitled **THE NEW SOUTH**, from the pen of COL. M. B. HILLYARD, of New Orleans, La. The book is devoted to an exposition of the South. It will treat of topography, soil, climate, woods, water-courses, resources, manufactures and such laws as are needful to be known. It will portray the attractions to the capitalist, and those seeking homes in the South, in the lines of manufacture, horticulture and agriculture. It will show what the South is and what she is likely to become by reason of her almost untouched, and slightly known resources in soil, climate, rainfall, marls, minerals and geographical position, and the vast variety of products possible to a wise and varied husbandry, and a grasp of her rich opportunities for manufacture.

The information is new, broad, accurate, unbiased and abundantly avouched by unquestionable authority.

The book is entirely new in its scope and design, and aims to be a guide to all seeking information on most vital matters. No such book has ever been written; and it meets a want now imperative to those seeking information as to the South.

No one wishing to be informed about the South, either in this country or Europe, can dispense with this book.

The author is well-known both North and South for his long identification with Southern development, and perhaps no one else has contributed more to the general stock of information bearing on the South in the columns of Northern journals. His study of the South has been long, large and unremitting, and he contributes the ripe results of these years of study and personal inspection to the preparation of this book. His many qualifications pointed him out to the publishers as the one most fitted for a duty of such delicacy, magnitude and responsibility. They have, however, preferred not to rely upon their own convictions alone as to the author's fitness for the work. Below is furnished abundant testimony from eminent persons North and South, whose reputation, in some instances, is not limited to this continent, and who have witnessed the work of the author for years, in his attempts to invite attention to the South. These are replies to letters sent out by the publishers enquiring as to COL. HILLYARD's fitness for this work.

The book will contain about 400 pages, and will be sold at a price but little in advance of the cost. It will be handsomely gotten up, and will be a model of typography. Its price will be, in paper covers 75 cents; in cloth, \$1.25. At these prices the sale of the book will not, of course, prove largely remunerative; nor was it with that object that it was undertaken. To the author the writing of it has been a "labor of love," and a furtherance of aspirations for Southern development. To the publishers it affords an opportunity to emphasize, and they hope, signalize, their enterprise, and to contribute a noteworthy indication of their resolve to press the claims of the South upon the capital and enterprise of the world.

The work is confidently commended for the novelty and amplitude of its design, for the breadth and accuracy of its information, for the laboriousness of its research, the many years of study and investigation there formulated, and its conscientious and impartial animus.

The following are letters corroborative of the wisdom of committing this work to COL. HILLYARD:—

From MAJOR S. A. JONAS, *Aberdeen, Miss., United States and State Commissioner from Mississippi to the World's Industrial and Cotton Centennial Exposition*:—"In answer to your favor of recent date I take pleasure in saying that I have known COL. M. B. HILLYARD for a number of years, and regard his selection as the editor and compiler of your book upon the South and its resources, as the wisest and best that could have been made. I do not in saying this pretend to gauge his literary capacity, but I know the man's wealth of information upon the subject you propose to confide to him, and where so much has been stored away in good and acceptable shape, it can hardly come forth any the worse for contact with its treasure house, especially in this instance, where the keeper is a man of character and culture, and withal an amiable and enterprising gentleman."

From PARKER EARLE, *Esq., President of the Mississippi Valley Horticultural Society, and Chief of the Horticultural Bureau of the World's Industrial and Cotton*

Centennial Exposition:—"Your engagement of COL. M. B. HILLYARD, of New Orleans, to write your proposed book, descriptive of the South and its varied resources, is a very fortunate one. I think there is no man in the country possessing so many qualifications for doing it accurately, ably and in a pleasing manner. I wish your enterprise great success."

From DANIEL DENNETT, *Esq., Agricultural Editor of the New Orleans Picayune*:—"I have just received your note. I have been acquainted with COL. HILLYARD for more than eight years. I know no man who has studied the interests of these States more intently than he, or with more ardent desire to benefit the South. He has acquired a vast amount of valuable information about the agricultural resources and mineral wealth of these States, and has the ability to put his information in readable shape. I consider him scrupulously honest, and his character above reproach. No man has shown more zeal or industry than he in efforts to promote the best interests of the Southern people. He is popular, and makes friends wherever he goes; and his friends are the best informed people in this country. He has a happy faculty for collecting such facts as you need for the book you intend to publish."

From JAMES H. HEVERIN, *Esq., The Eminent Philadelphia Lawyer*:—"I have known COL. M. B. HILLYARD all his lifetime; and I know no one, who from native talents, natural tastes, thorough education, long residence in the South, general experience, close observation, impartial judgment, and conscientious promptings, is more competent for the work you have confided to him. COL. HILLYARD has resided in a number of the Southern States, and during that time I have known, seen and heard much of him. He has been a close student, a careful observer and at all times an interested and enterprising citizen. He is thoroughly familiar with the States of the South, their governments, their people, customs, habits, products, industries, resources and histories, and is therefore fully and admirably equipped in every way for the charge with which you have entrusted him. It gives me great pleasure to commend him to those who may be interested in your contemplated publication."

From THOMAS MEEHAN, *Esq., The Celebrated Author, now Editor of The Gardeners' Monthly, Philadelphia*:—"I am very glad to know that you contemplate issuing a work on the industrial resources of the South."

I deem it fortunate that you have been able to secure the assistance of COL. HILLYARD in connection with it. I know of no man more able, while he has the advantage of thorough conscientiousness. I always found in my experience that if COL. HILLYARD said a certain thing was so, I might safely repeat it without danger of contradiction."

From COL. LEE CRANDALL, *Editor of The National View, Washington, D. C.*:—"I am very glad to know that you will soon publish a book on the Southern States."

You have made an admirable selection in COL. M. B. HILLYARD to write such a work. He is thoroughly acquainted with every section of the South, and will collect information invaluable to those desiring knowledge of any Southern State."

From J. G. KINGSBURY, *Esq., Editor of The Indiana Farmer, Indianapolis*:—"COL. M. B. HILLYARD has contributed to our columns, and he is a clear and interesting writer, careful and painstaking in collecting and reporting information regarding the condition and resources of the Southern States. He is eminently qualified for the work in which he is now engaged."

From GENERAL A. M. WEST, *Formerly President Mississippi Central R. R. Co., 2d Vice-President New Orleans, St. Louis and Chicago R. R. Co., President Mississippi Valley R. R. Co., etc.*:—"Your letter received, and contents noted. * * * I congratulate you on the selection of MR. HILLYARD. No one more competent than himself could have been chosen."

From A. C. DANNER, *Esq., President Danner Land and Lumber Co., Mobile, Ala., President Bank of Mobile, Vice-President North and South R. R. Co., of Alabama*:—"I believe that COL. HILLYARD would be a suitable man for the work you describe. He is an industrious man, an honest man, and an educated man. Take him all in all, I know of no one more suitable for the work in question than he is."

From GENERAL S. D. LEE, *President Agricultural and Mechanical College of Mississippi*:—"I consider COL. M. B. HILLYARD, of New Orleans, as a most competent gentleman to prepare a book embodying a description of the Southern States."

From GENERAL E. C. WALTHALL, *Granada, Miss., One of the Best Known Lawyers in the South*:—"When MR. M. B. HILLYARD lived in Mississippi, he gave much attention to the consideration of the resources of the State, and wrote much for journals in the North as to its timber, soil, climate, &c. He is a fine writer and well-fitted for the work you propose."

From S. H. EDGAR, *Esq., Manager New York Office, Louisville and Nashville Railroad, 52 Wall Street, New York*:—"In reply to your letter at hand a day or two since relative to the book you design publishing, descriptive of the Southern States, I beg to say that I consider COL. M. B. HILLYARD excellently well qualified for preparing the book in question. I have known him well for several years. He is a skilled writer; conversant especially with the physical characteristics of the Southern States; laborious and conscientious; and zealous in the work of making known the advantages the South possesses in climate, soil and general productiveness. You are happy in the selection of COL. HILLYARD to write your book."

Subscriptions can be sent in now by postal note or money order to BIGSBY & EDMONDS, publishers Manufacturers' Record, Baltimore.

Wm. H. Haskell, President.

E. S. Mason, Treasurer.

D. A. Hunt, Agent.

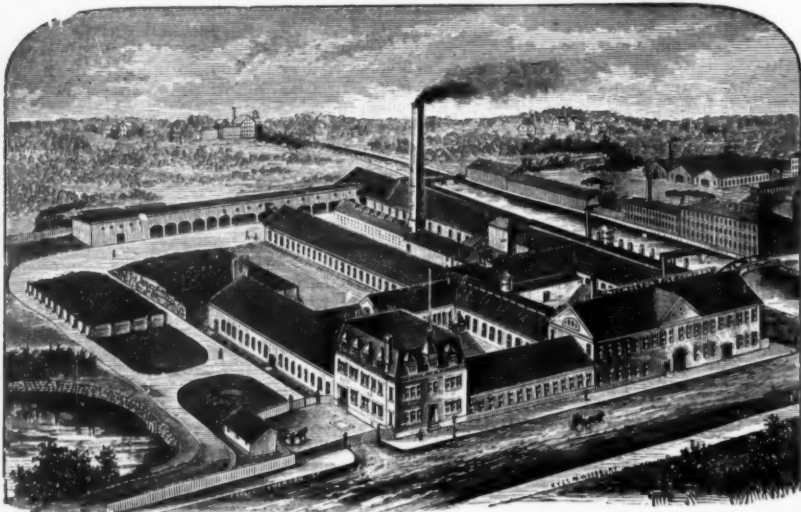
W. M. H. HASKELL CO.MANUFACTURERS OF
GIMLET POINT**COACH SCREWS.**Bolts, Cold-Punched Nuts & Washers,
Suitable for Machinery of all kind.

Office and Works: 277 Main St., PAWTUCKET, R. I., U. S. A.

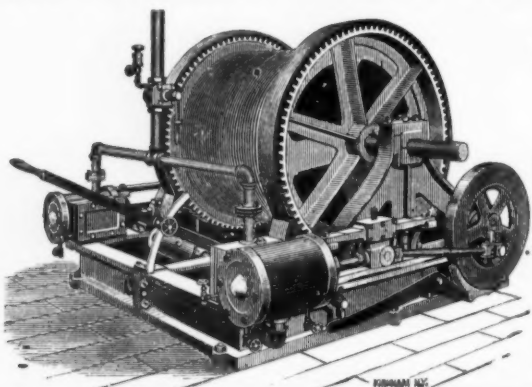
HENRY B. NEWHALL CO., Agts.,

105 Chambers St., NEW YORK.

47 Pearl St., BOSTON.

**Nicholson File Co.**

Works—PROVIDENCE R. I.—1882.

IMPROVED HOISTING ENGINES—WITH—
WIRE-ROPE DRUMS
AND
SAFETY BRAKES.

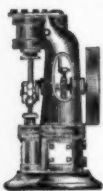
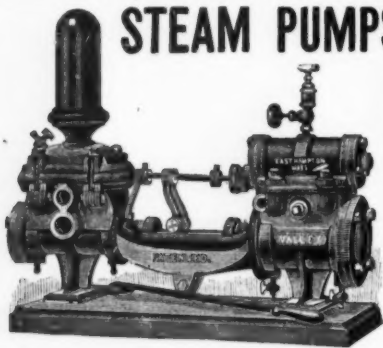
SPECIALLY ADAPTED TO

Mining & Interests.

MANUFACTURED BY THE
Lidgerwood Mfg. Co.

96 Liberty St., N. Y.

Hoisting Engines for all purposes.

MORTON, REED & CO., Agts.
59 & 61 German St., Baltimore.**STEAM PUMPS FOR EVERY DUTY.**Best
Boiler Feed
PUMPS
in the
World.**Acme. Bucket Plunger.**
VALLEY MACHINE CO.,
Easthampton, Mass.

"Nothing is denied to well directed Diligence."

MYERS' SANITARY DEPOT.Office and Salesroom—92 Beekman Street,
Factories—126 Beekman and 212 Front Street.
Warehouses—246 Water Street.

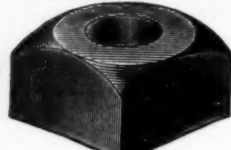
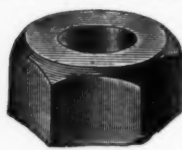
—NEW YORK.

SPECIALTIES IN PLUMBERS' SUPPLIES.

MOOPES & TOWNSEND,

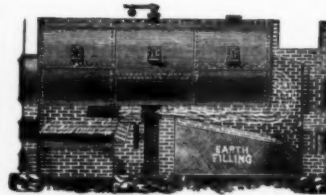
MANUFACTURERS,

PHILADELPHIA, PA.

**KEYSTONE BOILER RIVETS.**

Cold-Punched Square and Hexagon Nuts.

Finished and Case-Hardened Steel Hexagon Nuts.

BRIDGE RODS AND RIVETS.**BUILDERS' IRON WORK.****TANK AND COOPERS' RIVETS.****JARVIS PATENT FURNACE****FOR SETTING STEAM BOILERS.**Economy of Fuel, with increased capacity of Steam Power. Like the **Siemens Process of Making Steel**, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, &c. Send for Circulars.**Jarvis Engineering Co.,****A. F. UPTON, Treas. and Gen'l Manager,**
7 Oliver St., Boston, Mass.**JOSHUA C. COE, Agent for Maryland and Virginia,**
18 Second Street, Baltimore, Md.**SOUTHERN REFERENCES:**Eagle & Phenix Mfg. Company, Columbus, Ga.
Lane Cotton Mills, New Orleans, La.
Central Rolling Mills, Louisville, Ky.
Anniston Mfg. Co., Anniston Ala.
J. P. King Mfg. Co., Augusta, Ga.
Coosaw Mining Co., Charleston, S. C.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Ettrick, Matoca and Battersen Mfg. Co's., Petersburg, Va.Symington Bros. & Co., Baltimore, Md.
Basin Fertilizing Co., Baltimore, Md.
Henry McShane & Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibley Mills, Augusta, Ga.
Graniteville Mfg. Co., Graniteville, S. C.
Charleston Haggling Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Nashville Mfg. Co., Nashville, Tenn.
National Mfg. Co., Nashville, Tenn.

TRADE MARK.

**COVERT'S PATENT HARNESS SNAPS, CHAIN & ROPE GOODS,**

ADJUSTABLE SOLDERING IRONS, &c.

These Goods are sold by all Leading Jobbers in General and Saddlery Hardware, at manufacturers' prices. Send for illustrated catalogue and price list.

COVERT MF'G CO., West Troy, N. Y.**FOR SALE CHEAP!**

Constantly on hand a line of Machinery, new and second hand, such as

—Engines, Boilers, &c.—

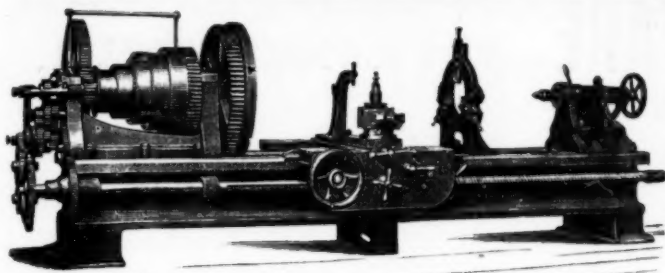
MANUFACTURER OF

MATTHEWS' AUTOMATIC HIGH-SPEED ENGINE

For Electric Light purposes, requiring steady, reliable power.

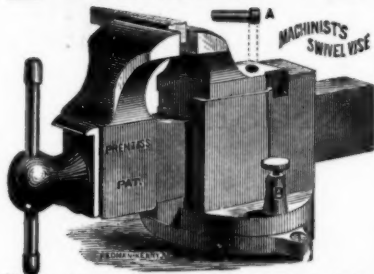
STEAM POWER FOR RENT.**JOSEPH B. MATTHEWS,**

41 Centre Market Space, BALTIMORE, MD.

WM. B. BEMENT & SON,

Philadelphia,
Manufacturers
of
**METAL
Working
Machine
TOOLS**

of all descriptions, and of a great number of sizes, including STEAM HAMMERS, Steam and Hydraulic Riveters, Cranes, Punches, and Shears, Bending Rolls, Plate Planers, &c.

Prentiss' & Patent Vises.

Adjustable Jaw.
Stationary or Pat. Swivel Bottoms.

CANNOT GET OUT OF ORDER.

Cheapest and Best Vises for Railroad Shops, Machinists, Manufacturers, Mechanics, &c.



"PEERLESS" (SWIVEL) PIPE GRIP.

For Sale by the Trade.

"Peerless" (Swivel Jaw) Pipe Grip.
Every Part Interchangeable.
CAN BE USED ON ANY VISE.

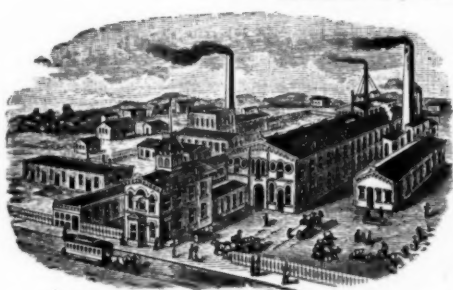
PRENTISS VISE CO., 23 Dey Street, NEW YORK, Sole Proprietors.

Ludlow Valve Manfg. Co.

Office and Works:

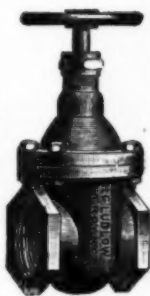
938 to 954 River Street, and 67 to 83 Vail Avenue,

—TROY, N. Y.—

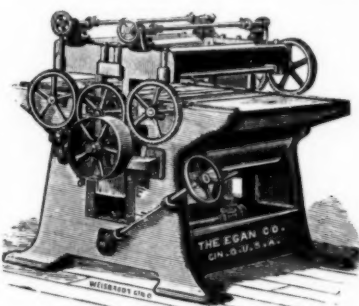


VALVES

Double and Single Gate, 1/2 inch to 48 inch—outside and inside—Screws, Indicators, etc., for Gas, Water, Steam, Oil.
Send for Circular.



Also Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves.

**Wood-Working Machinery**

Of the Latest and most Improved Designs for
Planing Mills, Furniture Factories, Chair
Factories, Car and Agricultural Works,
Carriage and Buggy Shops and
GENERAL WOOD WORKERS,

MANUFACTURED BY
THE EGAN CO.

(Successors to the Cordesman & Egan Co.)

228 to 240 W. Front St. Cincinnati O., U. S. A.
Thos. P. Egan, Pres. Ed. Ruthven, Sec. F. Danner, Sup.

EWART'S PATENT CHAIN BELTING

Especially designed for the rapid and economical handling of Grain, Malt, Saw Dust, Coke and Clay, Dry and Spent Tan, Phosphates and Chemicals, Broken Stone, Coal, Ice, Ores, etc.

R. SWORMSTEDT,

48 S. FREDERICK ST.

Sole Agent for Maryland, Virginia,
North Carolina, South Carolina and
Georgia.

Send for Illustrated Catalogue.

Please mention this paper.

WM. SELLERS & CO.

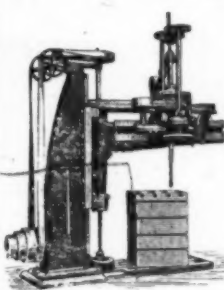
PHILADELPHIA.

Iron and Steel-Working Machine Tools

For Railways, Machine Shops and Rolling Mills,

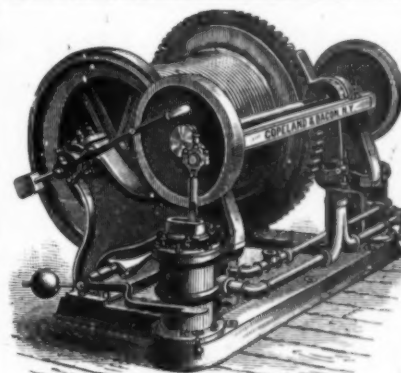
—ALSO—

Shafting, Pulleys, Hangers, Couplings, &c.



Were the first parties to design and introduce the BALL and SOCK-ET HANGERS, ADJUSTABLE COUPLINGS, and the system of selling Shafts, Pulleys and Couplings by the piece. Will be pleased at any time to give estimates for work in place, in mills, or at our works.

Price-Lists and other information given when requested.



BACON Winding Engines,
Furnace Hoists,
Mine Hoists.

(With or Without Boilers.)

"Mining PLANTS," Concentrating
Works and Dredging Machinery
Furnished Complete.

COPELAND & BACON,

85 Liberty Street, New York.

REFERENCES:—Croton Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown Point, N. Y. Belvidere Iron Co., 52 Broadway, New York. Sea Island Chemical Co., Beaufort, S. C.

THE NATIONAL CHUCK

WARRANTED

THE BEST CHUCK IN THE MARKET.

MANUFACTURED BY

THE **National Mfg. Co.**

MANUFACTURERS OF

Combination, Universal
and Independent
LATHE CHUCKS.



NEW HAVEN, CONN.

THE MIDVALE STEEL CO.**TIRES and AXLES**

OF EVERY DESCRIPTION.

TOOL
AND
MACHINERY STEEL



SPRING AND GUN
STEEL.

CRUCIBLE AND OPEN HEARTH STEEL.

Works & Main Office:

Nicetown, Philadelphia, Pa.

BRANCH OFFICE:

333 Walnut St., Philadelphia, Pa.

The Babcock & Wilcox Water Tube Boilers.

BRANCH OFFICES:

90 Oliver Street,
Boston.

32 N. 5th St.,
Philadelphia.

96 Fourth Ave.,
Pittsburg.

54 Carondelet
St., N. Orleans.

64 W. Third St.,
Cincinnati.

BRANCH OFFICES:

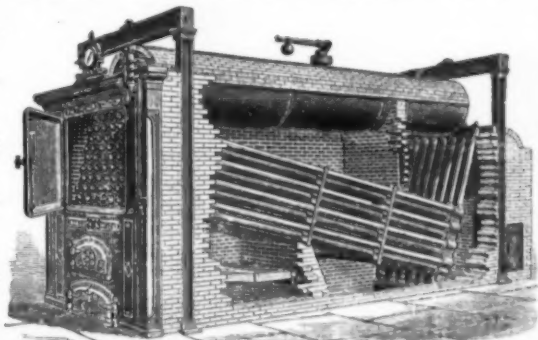
707 Market St.,
St. Louis.

64 S. Canal St.,
Chicago.

551 Mission St.,
San Francisco.

San Ignacio,
No. 50, Havana,
Cuba.

107 Hope Street,
Glasgow,
Scotland.



Manufactured by the **BABCOCK & WILCOX CO., 30 Cortlandt Street, NEW YORK.**

SAML. G. B. COOK & CO., HARDWARE

MANUFACTURERS' AGENTS

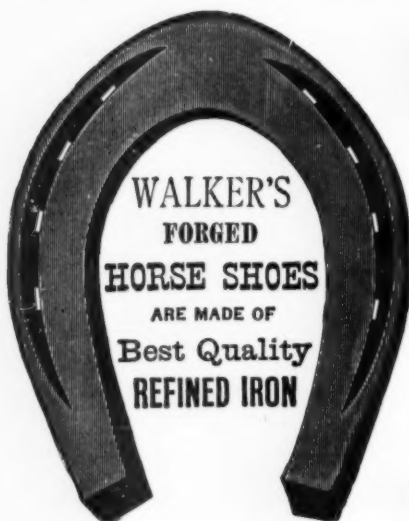
63, 65, 67 and 69 German St., BALTIMORE, MD.

AGENTS FOR

T. V. Allis Mfg. Co.—Buckthorn Wire.
American Screw Co.—Screws, Rivets, Bolts, etc.
Branford Lock Works.
Boss Molasses Gates.
Carr & Crawley.—Shelf and Carriage Hardware.
Lancaster Bolt Co.—Eagle Carriage Bolts.
Lawson & Brenizer.—Hay and Manure Forks.
Meriden Britannia Co.—Rogers Bros.' Art Plated Goods.
Northwestern Horse Nail Co.
Nicholson File Co.
Naugatuck Cutlery Co.
Globe Horse Nail Co.

Clark Hardware Co.—Spring Butts, Screen Frames, etc.
Cowles Hardware Co.—Geers, Butts, Screw Drivers, etc.
H. Chapin's Sons.—Rules, Levels, Gauges, etc.
Clark Bros. & Co.—Bolts.
Essex Horse Nails.
A. Field & Sons.—Tacks, Finishing Nails, etc.
Hubbard, Bakewell & Co.—Lippincott Axes, Saws, Shovels and Hoes.
Holroyd & Co.—Stocks and Dies.
Henry W. Kipp.—Hammers.
Klein, Logan & Co.—Picks, Mattocks, Sledges, etc.
Kimball's Patent Shovels and Spades.
Lockwood Steel Hoes.

Peck Bros. & Co.—Brass Cocks.
Payson Mfg. Co.—Building Hardware.
Patton Mfg. Co.—Enameled and Tin'd Hollow Ware.
Roy & Co.—Strap and T Hinges and Wrought Butts.
Saranac Horse Nail Co.
Scott Mfg. Co.—Peach and Apple Pearers, etc.
George M. Scott.—Blacksmith Bellows.
Wilson's Mfg. Co.—Coffee Mills, Vises and Ship Hardware.
Walker's Horse and Mule Shoes.
International and Pimlico Brand of Horse Nails, Foreign and Domestic Hardware, Cutlery, Chains, Pistols, etc.



Walker Horse Shoe Co., Baltimore, Md.

OF SUPERIOR SHAPE and FINISH.

Clean Crease of Proper Width and Depth. Nail Holes Punched Through at Proper Angles.

Free from Burs. Outside Edges Smooth and Free from Bulges. Popular with all Shoers, as they are easily fitted. **EVERY SHOE WARRANTED.** ALSO,

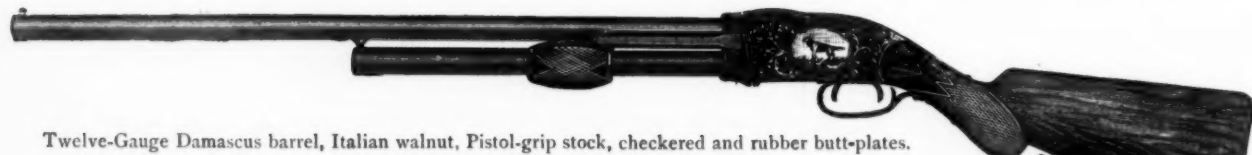
MULE SHOES,

Of Superior Pattern, Quality and Shape.

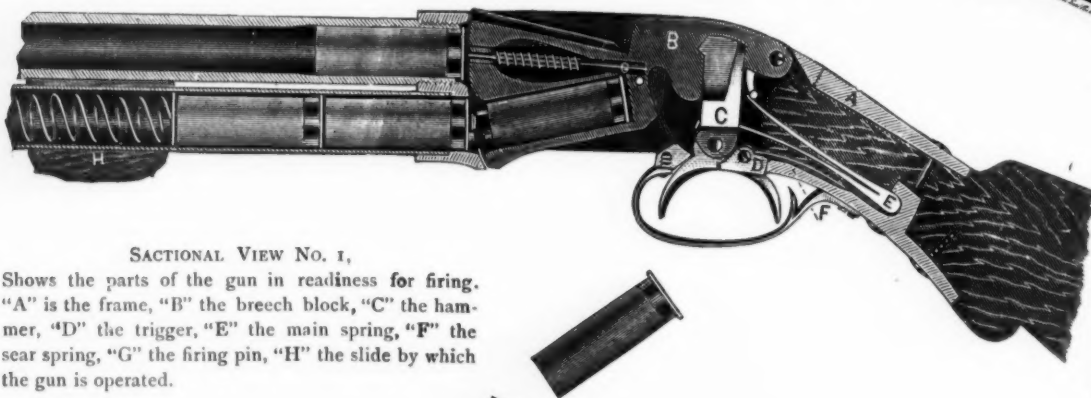
Sole Patentees and Manufacturers.

SPENCER Repeating SHOT-GUN,

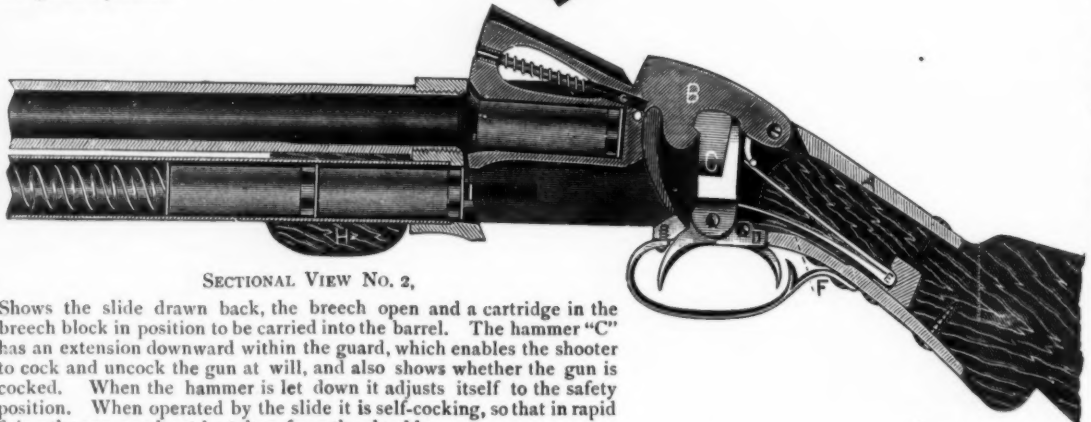
WILL FIRE SIX TIMES IN THREE SECONDS.



Twelve-Gauge Damascus barrel, Italian walnut, Pistol-grip stock, checkered and rubber butt-plates.



SECTIONAL VIEW NO. 1,
Shows the parts of the gun in readiness for firing. "A" is the frame, "B" the breech block, "C" the hammer, "D" the trigger, "E" the main spring, "F" the sear spring, "G" the firing pin, "H" the slide by which the gun is operated.



SECTIONAL VIEW NO. 2,
Shows the slide drawn back, the breech open and a cartridge in the breech block in position to be carried into the barrel. The hammer "C" has an extension downward within the guard, which enables the shooter to cock and uncock the gun at will, and also shows whether the gun is cocked. When the hammer is let down it adjusts itself to the safety position. When operated by the slide it is self-cocking, so that in rapid firing the gun need not be taken from the shoulder.

Unequaled for Safety, Workmanship, Force, Accuracy and Rapidity of Firing, Simplicity of Construction, Convenience of Loading, Etc.
Has won the Connecticut Individual Championship Badge four times
Within five months.

SEND FOR ILLUSTRATED CATALOGUE.
MANUFACTURED BY
THE SPENCER ARMS CO.,
WINDSOR, CONN.

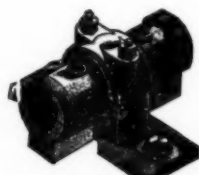
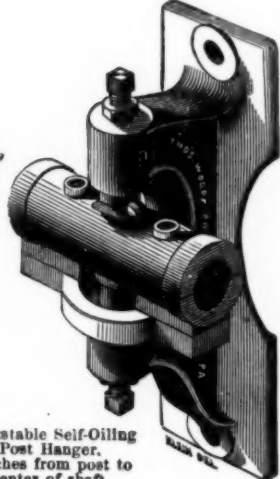
W. J. CHAPMAN, Direct Shipper Special attention given to orders from founders and machinists.
of COAL AND Connellsville Coke, Office, York and William Sts.

PORTABLE FORGES Empire Portable Forge Co. Cohoes, N. Y.
Send for Catalogue.

[illegible]



ADJUSTABLE SELF-OILING HANGER.

Ball and Socket
Self-Oiling Pillow Block.DOUBLE-BRACED
ADJUSTABLE SELF OILING HANGER.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.

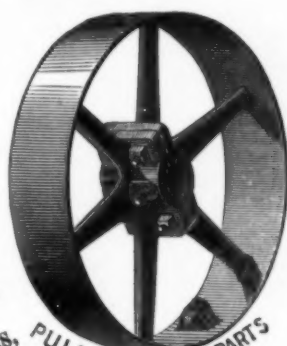
FAIRMOUNT MACHINE WORKS.
Office, 2106 Wood St., Philadelphia.
THOMAS WOOD,
Manufacturer of Specialties

Power Looms, Patent Bobbin or Quill
Winding Machines, Plain and Presser
Hemming Machines, Reeling,
or Spooling Machines, Sizing,
Warping, Pulling and Cal-
endering Machines.

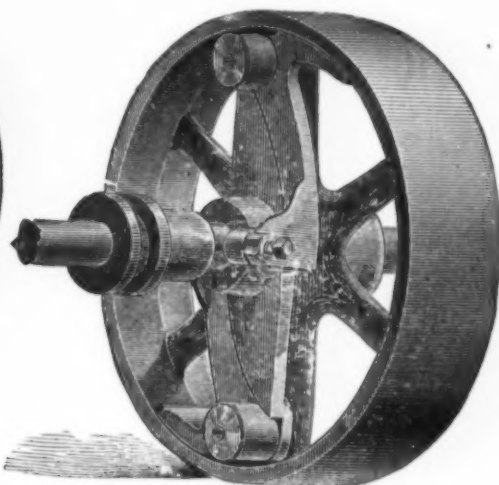
WARPING MILLS,
16, 18 and 20 yards Circumference,
WITH IMPROVED HECKS.

SHAFTING,
With Patent
ADJUSTABLE SELF-OILING HANGERS,
8, 10, 12, 15, 18, 20, 24 and 30 in. drop.

Also WALL, POST AND GIRDER HANGERS.
Pulleys, from 4 inches to 10 feet in diameter.
PATENT FRICTION PULLEY.
Pulleys in two parts, any size required.
Oil Presses for Lard, Fish and Paraffine.



PULLEY IN TWO PARTS

**PATENT FRICTION PULLEY.**

Simple, reliable and very durable.
Suitable for any kind of driving, they
serve equally well as driver or driven.

Special Driving,
such as Angular, Muley, and Galloway Driving,
furnished for any position
where possible to transmit power by belts.
PULLEYS from 4 inches to 10 feet in diameter.

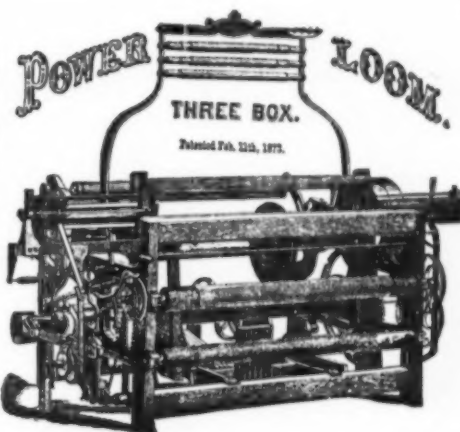
Why use old style Bearings, that require oiling
every day, when you can get Bearings at less cost
that only require oiling once in Six Months and
thus save oil and labor enough to pay for the bear-
ings in use. Test the matter for yourselves; a
trial always secures the trade.

ADDRESS.

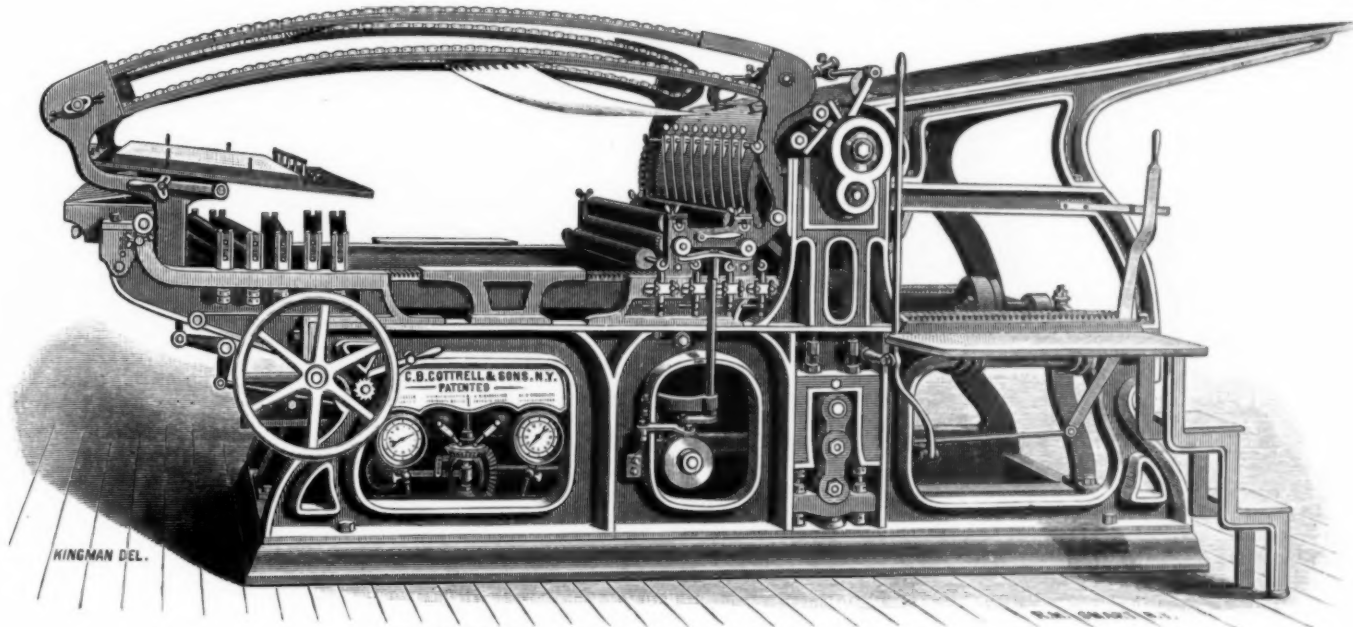
THOS. WOOD,

Office, 2106 Wood St.

PHILADELPHIA, PENNA., U. S. A.

**POWER LOOM.**
THREE BOX.
Patented Feb. 22, 1875.

C. B. COTTRELL & SONS' NEW FRONT DELIVERY TWO REVOLUTION PRESS.



THE ABOVE ENGRAVING REPRESENTS OUR NEW FRONT DELIVERY.

This is unquestionably the most important improvement in Printing Machinery that has been made in many years. It delivers the sheet printed side up in full view of the Pressman, convenient to his Fountain, no part of the printed matter being touched by anything, thus avoiding all possibility of smut, no matter what the quantity or quality of ink it may be found necessary to carry. In addition to this, it leaves the front and back of the Press free of access at all times, there being NO FLY, STRINGS, TAPES OR OBSTRUCTIONS OF ANY KIND; and, as it lays the PRINTED SHEETS almost AS STRAIGHT as when they came from the mill, it will be admitted that the percentage of WASTE is REDUCED to the MINIMUM. It delivers the sheets at FAST OR SLOW SPEEDS equally well; it does not require to be set for different size sheets. This improvement is in operation in many of the leading Printing Offices in this Country. We respectfully invite inspection and correspondence.

C. B. COTTRELL & SONS,

Offices: 8 Spruce St., NEW YORK. 198 Clark St., CHICAGO, ILL. Manufactory: WESTERLY, R. I.

1885 WIDE AWAKE. 1885

THE MAGAZINE OF TRUE STORIES.
Foremost in pleasure giving.

Foremost in practical helping.
SERIAL STORIES.

DOWN THE RAVINE. By Charles Egbert Craddock. No story in young folks' literature for the last ten years has approached this in combined originality, humor and picturesque strength. Illustrations by E. H. Garrett.

HOW THE MIDDIES SET UP SHOP. By Adeline D. T. Whitney. A jolly business story, and a first-rate detective story too.

IN LEISLER'S TIMES. By Elbridge S. Brooks. A stirring tale, historically true, of the days when New York City was peopled with Knickerbocker Dutch, Indians, wolves and bears. 24 illustrations by Wm. T. Smalley.

THE HUBBLING TRIOT. By Lizzie W. Champney. The second of the Wide Awake Wonder Stories.

ILLUSTRATED ARTICLES.

of adventure, congenial art and science, and novel industries.

A NEW DEPARTURE FOR GIRLS. (Several Articles.) By Margaret Sidney.

HOW THE BOOJUMS WENT DOWN THE CRATER. By Ten of the Boojums.

AFTER BUFFALOES. By Lieht. C. E. S. Wood.

AT PUSSY-CAT PALACE. By Amanda B. Harris.

The history of a XIXth century happy thought.

A DAHABREAH WRECK. By Julian B. Arnold.

A YOUNG NUMISMATIST. By M. B. Ballard.

THE SCARABEUS CLUB. By F. Chesbro.

LAZY BARBER'S AMBITION. By F. H. Throop.

A WINDMILL PILGRIMAGE. By Amanda B. Harris.

AMONG THE GYPSIES. By M. H. Catherwood.

A GROUP OF FOUR TRUE WESTERN STORIES.

WAGON-TIRE CAMP. By Kate Foote.

THE RICH MAN OF THE MOUNTAINS. By Helen Sweet.

OUR VENTURE. By Jane Andrews.

HOW WALTER FOUND HIS FATHER. By Flora Haynes Apponyi.

A GROUP OF FOUR TRUE EARLY NEW ENGLAND STORIES. By Mary E. Wilkins, from original records and documents.

A GROUP OF FOUR TRUE PLANTATION STORIES. By Mrs. Jesse Benton Fremont (really her own girlhood.)

WHEN I WAS A BOY IN CHINA.

A dozen articles by Yan Phou Lee, son of a Mandarin.

THE POPSY STORIES.

Stories by "H. H." about a determined little Western girl.

WONDERFUL CHRISTMASSES OF OLD.

By Hezekiah Butterworth. Ten drawings by Lungen.

CHILD LIFE IN VENICE.

Two articles, with twenty drawings by Joseph Pennell.

THE CHRISTMAS FRONTISPIECE IN COLORS.

which L. Prang & Co. have reproduced in some twenty colors, from the water-color by F. H. Lungen, surpasses anything ever before attempted in magazine making.

STRONG, PRACTICAL AND EDUCATIONAL SERIAL ARTICLES.

of twelve chapters each, in the C. Y. F. R. U. Department: THE CHILDREN OF WESTMINSTER ABBEY, Rose G. Kingsley; SOUVENIRS OF MY TIME, Jesse Benton Fremont; THE TEMPERANCE TEACHINGS OF SCIENCE, Prof. A. B. Palmer; BOYS' HEROES, Edward Everett Hale; WAYS TO DO THINGS, Various Authors; ENTERTAINMENTS IN CHEMISTRY, Harry W. Tyley; THE MAKING OF PICTURES, Sarah W. Whitman; SEARCH QUESTIONS IN AMERICAN LITERATURE, Oscar Fay Adams.

HEROINES OF THE ENGLISH POETS.

Twelve selections from famous poems, each accompanied by a superb full-page illustration. F. H. Lungen is now at work upon this remarkable series of drawings: Chaucer's GRISELDE; Spenser's UNA; Herrick's CORINNA; Shakespeare's CORDELIA; Scott's ELLEN; Woodworth's LUCY; Coleridge's GENEVIEVE; Keat's MADEIRA; Burn's HIGHLAND MARY; Tennyson's ENID; Mrs. Browning's AURORA LEIGH; Robert Browning's BALAUCTION.

WIDE AWAKE is only \$3.00 a year. Vol. begins December. Send for copy

D. LOTHROP & CO., Publishers,
Franklin and Hawley Sts., Boston, Mass.

FOR SALE.

An entire outfit of Machinery, Tools, &c., for the manufacture of Pails, Tubs, Churns, Packing Pails, Well Buckets, Kegs, &c., in good order, and will be sold cheap. Specifications and prices furnished upon application to

A. C. PARKER,
81 Madison St., Memphis, Tenn.

WIRE RAILING

and Ornamental Wire Works.

DUPUR & CO. 36 N. Howard St., Baltimore.

Wire Railing for Cemeteries, Lawns, Gardens, Offices and Balconies; Window Guards, Tree Guards, Wire Cloth, Sieves, Fenders, Cages, Sand and Coal Screens, Iron Bedsteads, Chairs, &c.

REUBEN HAINES,

Analytical Chemist,

738 SANSOM ST., PHILADELPHIA.

Water Analysis and Assays of Ores and Minerals.

STANCH AND RELIABLE

COLUMBIA BICYCLES

FOR ROAD TRICYCLES

THE POPE MFG CO

597 Washington St. Boston - Mass.

"If I could not get another bicycle I would not give mine for its weight in solid gold. For fifteen years I lost from three to eight days every month with sore and sick head-ache. Since I have been riding the bicycle I have lost only two days from that same, and I haven't spent a dollar for a doctor." Rev. GEO. F. FENTON.

FIREST MATERIALS SKILLFUL WORKMANSHIP

Special attention paid to Bookbinders' Knives and Shears.

ANTHONY & CO.

Edge Tool Grinders & Polishers,

NO. 41 CENTRE MARKET SPACE,

BALTIMORE, MD

Files, Anvils, Saws, Razors and Scissors; Sausage, Straw, Shingle, Cork, Carving, Table and Butcher Knives and Cleavers; Carpenters', Coopers' and Shipwrights' Tools; Tinners' Shears and Leather Splitting Knives; Brass and Iron Castings and Machine Work; Tailors', Hatters' and other Flat Irons made equal to new, &c. Satisfaction guaranteed. Country orders promptly attended to.



Established 1867.
E. Harrington, Son & Co.

MANUFACTURERS OF
PATENT EXTENSION AND
SCREW-CUTTING

LATHES,

Iron Planers,

Radial, Upright, Suspension,
Multiple and Lever

DRILLS,

and a variety of other
MACHINISTS' TOOLS

Patent
Double Chain Screw
Pulley Blocks.

Unrivalled for Durability,
Safety and Power.

Patent Double Screw
Quick-Lift Hoists,

with brake for quick and easy
lowering.

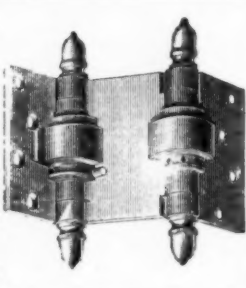
Circulars furnished.

Works and Office, Cor.
N. 15th and Penna. Ave.,
Philadelphia, Pa.

Represented by J. Q. MAY-
NARD, 12 Cortlandt St., N.Y.;
C. E. KIMBALL, 191 High
St., Boston; W. H. RICKEY,
116 Main St., Cincinnati.

UNION SPRING HINGES

are Simple, Easily Set.
Cannot be put on wrong. They work
smoothly and last long. Single
or double acting. For Wire Screens, Single
Light Doors they have no equal. Send for
Price List. M. W. ROBINSON, Sole Agent,
79 Chambers St., New York.



1887. NOVELTY WORKS. 1883.

JAMES MURRAY & SON,

Machinists and Millwrights

Engines and Boilers, Mills of all kinds, Marine
Railways, &c. Improved Clay Tempering Ma-
chinery, Steam or Horse Power. Phosphate
Machinery, Crushers, Rollers, Mixers, &c., &c.

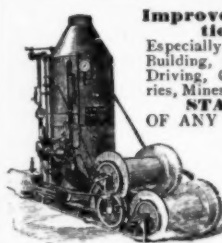
40, 42 & 44 York Street,

NEAR LIGHT, BALTIMORE.

Repairing of all kinds promptly done.

Hoisting Engines

Of any Power, Double and Single, with



Improved Patent Friction Drums.

Especially adapted for Bridge
Building, Dock Building, Pile
Driving, Coal Hoisting, Quar-
ries, Mines, etc.

STAMP MILLS

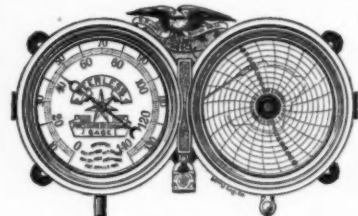
OF ANY SIZE FOR MINES.

J. S. MUNDY

22 & 24 Prospect St.

Newark, N. J.

RECORDING PRESSURE GAGE.



It shows the pressure and all its variations: showing
the time of each and every change of pressure.
Will send one on trial. WRITE FOR CIRCULAR.

S. P. JONES, 28 SCHOOL STREET, BOSTON, MASS.

ESTABLISHED 1865.

Steam Boilers

JOHN T. COLEMAN & SONS,

Steam Boiler Works,

Cor. Holliday and Pleasant Sts., Baltimore.

Manufacturers of all kinds of Steam and Bath Boilers,
Smoke Stacks, Water Tanks, Lard Kettles, &c.
Particular attention given to repairs.

THE NEW YORK DAILY

Commercial Bulletin

IS CONCEDED TO BE

THE LEADING TRADE JOURNAL

OF THE UNITED STATES.

And one of the Foremost Exponents of the Banking
and Financial Interests as well as the Chief
Representative of the Dry Goods and
Insurance Interests.

Its Mar-
ket Reports on
Broadstuffs, Provis-
ions, Cotton, Groceries,
Dairy Products, Country Pro-
duce, Freights, Petroleum, Naval
Stores, Metals, &c., and its Commer-
cial News, and Statistical Information
are Fuller and More Accurate than those
of any other Journal; and no efforts will be
spared to add to their Reliability and
Completeness.

Without political bias or alliances, it seeks to subordi-
nate legislation to the material interests of the people. It
favors Freedom in Banking, Freedom in Commerce, and
Freedom in Corporations: demanding for the individual
and the association the largest liberty to buy or to sell, to
lend or to borrow, anywhere and on any just terms and
conditions without artificial restriction.

Subscription Price, \$12 Per Year.



THE- Sigourney Drill.

Sensitive and Strong.

Capacity Unequaled.

Has index lines on column, stop
on pinion shaft and spindle so ar-
ranged that the drill will not
catch. Fitted with chuck for
spindle, bell and dead centers
and V's for drilling transversely
through cylindrical forms; also
with a 4-inch chuck for center-
ing shafts without first finding
center by other methods.

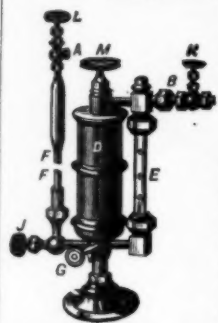
Send for circular.

Every machine warranted.

The Sigourney Tool Co.,
Hartford, Conn.

The Seibert Cylinder Oil-Cup Co.

SOLE MANUFACTURERS OF



Oil Cups for Locomo-
tives, Marine and Sta-
tionary Engine Cylinders,
and the Seibert
and Gates Patents,
with Sight Feed.

Take Notice.

The "Sight Feed" is
owned exclusively by
this company. See
Judge Lowell's deci-
sion in the United
States Circuit Court,
District of Massachu-
setts, Feb. 23d, 1884.—
All parties are hereby
notified to desist the
use, manufacture or
sale of INFRINGING
CUPS, as we shall vig-
orously pursue and prosecute all infringers.

THE SEIBERT CYLINDER OIL-CUP CO.

53 Oliver St., Boston, Mass.

Bound Volumes of these Beautiful Magazines are
now ready at
the bookstores
Unequaled as
Delightful Gifts
for Young Peo-
ple, Boys and
Girls, and Very
Little Folks.
They furnish the
greatest amount
of Choicest Reading and Pictures at the Lowest
Price.

SEND SUBSCRIPTIONS FOR ..
WIDE AWAKE, \$3.00
BABYLAND, 50c.
OUR LITTLE MEN & WOMEN, \$1.00
THE PANSY, \$1.00
CHAUTAUQUA YOUNG JOURNAL, 75c.
TO D. LOTHROP & CO. BOSTON

TAPS & DIES
VISES
DRILLS
SCREWS
LATHES
STEEL
STOCKS

TOOLS for Machinists, Amateurs, Jewellers, Model
Makers, Blacksmiths, Carpenters, Coachmakers, etc.
Send 25 cts. for new Metal Worker's Catalogue, 500 Pages.
Wood Worker's Catalogue free.
CALLMAN & McFADDEN, Philadelphia, Pa.

No Water! No Brush!

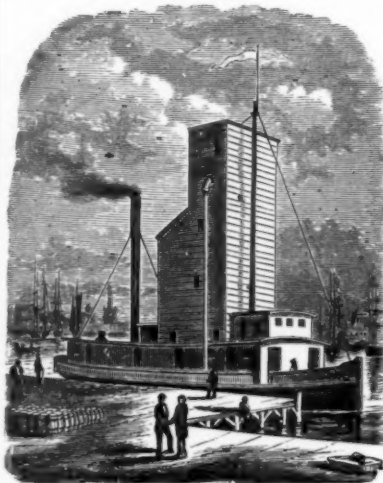
USE THE

New York Moist Letter Copying Book,

MANUFACTURED BY

New York Stationery & Envelope Co.

62 John St., New York.



F. H. FOLSOM,

Millwright and Mechanical Engineer,

48 S. Frederick St., BALTIMORE, MD.

All work executed and Drawings furnished
at shortest notice for Floating and Stationary
Elevators, Flour Mills, Malt Houses, Breweries,
Saw Mills, Fertilizer Factories, Sumac Mills,
Paper Mills, and all other kinds of Machinery.—
Orders by mail promptly attended to at lowest prices.



Agent for Seidner's Improved Belt Fastener.

—Send for Circular and Sample.—

IRON WORKING MACHINERY.

NEW.

- 1 Engine Lathe, each 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48 in. swing; length of bed to suit.
- 1 Fox Turret Lathe, each 13, 15 and 16 in. swing; 5 ft. bed.
- 1 Sq. Arbor Lathe, 15 in. x 6 ft.
- 1 each, Hand Lathes, 10, 12, 14, 15 and 18 in. swing.
- 1 Iron Planer, each to plane 18, 20, 22, 24, 26, 30 and 36 in. wide and high; length of table to suit.
- 1 each 16, 20, 22, 23, 25, 28, 30, 34, 38 and 42 in. swing. Upright Drills.
- 1 each, 2, 3, 4 and 6 Spindle Gang Drills.
- 1 each 8, 10, 12, 15, 20 and 28 in. Shapers.
- 1 No. 2 Milling Machine. Lincoln Pattern.
- 1 Grant & Bogert Milling Machine.
- 1 each, Nos. 2, 4 and 5 Screw Machines.
- 1 each, 3 and 7 Spindle Nut Tapper.
- 1 Boring and Turning Mill, each 50 and 72 in. swing.
- 1 Cutter Grinder.
- 1 12 in. and 20 in. Cylinder Horizontal Engine.
- 1 each 4, 5 and 6 ft. Arm Universal Radial Drills.
- 1 Pat. Makers Lathe, 25 in. x 12 ft. between centres.
- 1 Pr. Bending Rolls for 1/2 in. x 60 in. plates.

SECOND-HAND.

- 1 Engine Lathe, 23 in. x 7 ft.
- 1 " " each 18 in. x 8 & 10 ft. Good as new.
- 1 Iron Planer, 24 x 24 x 6 ft.
- 1 " " 20 x 20 x 4 ft. As order.
- 1 " " 24 x 24 x 5 ft. " "
- 1 " " 30 x 30 x 7 ft. " "
- 1 " " 37 x 37 x 9 ft. " "
- 1 600 lb. Drop Hammer. Merrill.
- 1 40 lb. Bradley Hammer.
- 1 Lincoln Pattern No. 2 Miller.
- 1 Bolt Cutter, to take sizes to 3/4 inch.
- 1 9 in. Stroke Shaper.
- 1 36 in. Gear Cutter.
- 1 Horizontal Boring Machine; takes 6 ft. between centres; 36 in. swing.

All kinds Machinists' Tools and Supplies.

New York Agency of the Tanite Co.

Grant & Bogert Machine Tool Works.

AND FOR THE

"New Polished" Shafting.

H. PRETISS & CO.

42 Dey Street, New York.

Industries and Resources

of the South.

PUBLISHED BY

Empire Publishing Co.

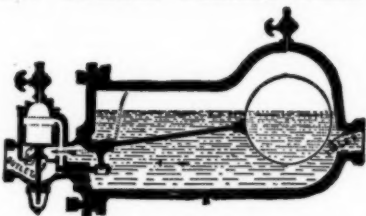
CHARLESTON, S. C.

To be had at \$1 a Volume.

Send for Catalogue,
Chandler & Farquhar,
168 Devonshire St.
BOSTON, - MASS.
Tools & Supplies
for all classes
OF MECHANICS AND
MANUFACTURERS.

UPRIGHT DRILLS
TAP-DRILL TOOLS
CUT-OFF TOOLS
GAUGES

The CURTIS STEAM TRAP.



Has main valve outside. Air valve inside.

MANUFACTURED BY

Curtis Regulator Co., 158 Beverly St., Boston.

—GENERAL AGENCIES:—

109 Liberty St., New York; No. 19 N. 7th St., Philadelphia; 56 and 58 Market St., Chicago; No. 49 Holliday St., Baltimore; No. 707 Market St., St. Louis; No. 745 Craig, Montreal.

NELSON CURTIS, Agent.

For Sale

Machinery & for & Handle and Spoke Factory.

One Drag Saw, for cutting logs into length suitable for handles or spokes.

One Bull or Centre Saw, with improved adjustable heads, for ripping any large or medium size timber into handle staves.

One Splitting Saw, for ripping small timber into handle or spoke staves.

One Blocking Saw sloping table, for blocking out handles.

Two Automatic Swing Lathes, for axe, mattock, coal pick, or any other oval, flat, straight or bent handles. Capacity, 25 to 30 dozen axe; or 35 to 40 dozen sledge handles.

One Spoke Lathe, for spokes, or sledge, mattock, or hammer handle. Capacity, 25 to 30 dozen.

One Guage Lathe, for any kind of round turning.—Broom handles, augur handles, plow and chair rounds, &c., &c. Capacity, 100 dozen augur handles.

One combined Throater and Trimmer, for handles.

One Trimming Saw.

One Spoke Planer and Throater.

One Spoke Throater.

One Ripping Saw.

One Cut-off Saw.

One Broad Double Grinder, to carry two twelve inch sand belts.

One Narrow Double Grinder to carry two six inch sand belts.

One hundred feet of Shafting with couplings complete.

One Lot Medart Wrought Rim Pulleys for driving all above machinery.

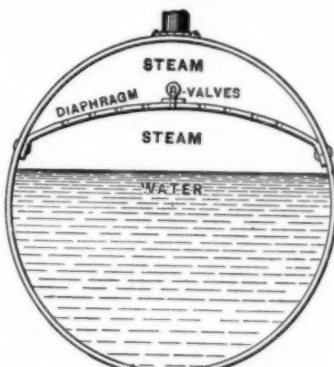
One Lot of Patterns, consisting of straight axe, bent axe, railroad pick, coal pick, mattock sledge, hatchet, hammer, adz, spokes, augur, broom handles, &c., &c. Probably 60 and 75 different styles and sizes.

ENGINE AND BOILER ALSO FOR SALE.

The manufacture of handles is a very profitable business, in any locality where there is hickory timber, and the plant required for the business is not an expensive one. The above equipment of a factory, with a daily capacity of 100 to 125 dozen handles, is in first-class condition and will be sold at a reasonable price. For particulars, address:

"WESTON," MANUFACTURERS' RECORD, BALTIMORE.

THE LAWSON NON-EXPLOSIVE BOILER.



This is the only steam boiler ever devised in strict compliance with the demands of natural laws. It gives complete immunity against explosions, delivers dry steam, prevents all incrustation and deposits on the bottom plates, affords safety with high pressure, and secures great economy. The invention is applicable to every style of boiler, and can be readily applied, internally or externally, to new or old boilers. Licenses granted on liberal terms to manufacturers. Send for description.

Lawson Non-Explosive Boiler Co.,
155 & 157 BROADWAY, N. Y.

J. W. LOANE,

13 N. Gay Street, BALTIMORE.

Manufactures and sells at lowest rates

TENTS, AWNINGS, FLAGS

Canvas Horse Covers, Plain and Oiled, Yellow and Black.

GIVE HIM A CALL. ORDERS OR ENQUIRIES BY MAIL RECEIVE PROMPT ATTENTION.

Sherman Mfg. Co.

JACKSON, TENN.

SPECIALTIES:

Automatic Engines; Slide Valve Engines, Portable and Stationary; Portable and Stationary Boilers; Saw Mills and Saw Mill Machinery; Pulleys, Shafting, Hangers, &c.

Agents for the Ballantine Ice and Refrigerating Machine, and for the Cube Pipe Tongue, the best and cheapest Pipe Tongue in the world.

CORRESPONDENCE SOLICITED.

Business Chances.

For the purpose of making the MANUFACTURERS' RECORD a still more valuable medium of communication between its readers North and South, we will publish, FREE OF CHARGE, short advertisements, not exceeding 40 words, from those in the South who have mills, factories, manufacturing sites or water-power for sale, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c.

In corresponding with any of these advertisers please mention the Baltimore Manufacturers' Record.

FOR SALE—A rare opportunity is offered for investment in the most valuable property in North Georgia. A half-interest (or the whole, to suit purchaser,) in the Catoosa Lime Works, at Graysville, on the line of the W. & A. R. R.,—Catoosa county, Georgia. Comprising four lime kilns, inexhaustible quarries, a saw mill, a box and keg factory, large flour mills, valuable water power and a large quantity of improved farming lands, will be sold on terms to suit purchasers. This property is offered for sale for the purpose of division. For particulars, address undersigned, C. W. Gray & Co., Graysville, Ga.

BLACKSMITH WANTED.—A good Blacksmith, sober, unmarried, can find a situation by addressing VIRGINIA, care MANUFACTURERS' RECORD.

A GENTLEMAN in the South desires to join others in forming a stock company for the purpose of erecting and operating a Cotton Seed Oil Mill, either in Georgia, Alabama, Mississippi or Texas. Would be willing to take good share of the capital stock, under a good management. Address Oil Mill, care MANUFACTURERS' RECORD.

FURNITURE BUSINESS.—Half interest in the Athens Furniture Works, Athens, Tenn., is offered for sale; price \$2,000. Splendid chance for a good, active man. Good new outfit; plenty cheap lumber; remaining partners good mechanics, economical and industrious. A business manager wanted as partner, with some cash capital. Address J. C. MANSFIELD, Merchant Miller, Athens, Tenn.

WANTED—Co-operation to rebuild the Pulaski (Tenn.) cotton and woolen mill, burnt last July. Stone foundation 50x106, brick stack, new 90 H. P. boiler, brick to rebuild a stories, with 2 els, 7 1/2 acres, 3 good large brick tenements, 2 frame tenements, store warehouse, stable shop, machine shop tools, and some money will be put in, unfailing spring water for steam, good location, and a good chance for investment. Apply to G. & M., Box 10, Pulaski, Tenn.

THE SUBSCRIBER offers a splendid location for saw mill, planing mill, or tight barrel factory, large lot with 30 H. P. engine and boiler, two story building, 35 x 75 feet and a large mill house. Situated in a thriving town on E. T. V. & G. R. R., in Georgia, with plenty of pine, and an inexhaustible supply of the finest white oak easy of access. Will sell the property, or invest it with the proper parties to put into the above or kindred business. Address J. R. Schofield, 156 Cherry street, Macon, Ga.

MR. G. H. RAWLINS, Rome, Ga., would like to receive catalogues of manufacturers of machinery for hosiery and knit underwear.

A PROVIDENCE HOUSE, having superior facilities for handling pig iron, desires to correspond with one or more Southern furnace proprietors with a view of selling their iron in this market. We have an extensive acquaintance with all the iron buyers in this market and a thorough knowledge of the business. With a good iron suitable for machinery that will be uniform in quality and low in price, large quantities can be sold. Address "B," box 1, 196, Providence, R. I.

A BALTIMORE HOUSE, having superior facilities for handling pig iron, desires to correspond with one or more Southern furnace proprietors with a view of selling their iron in this market. We have an extensive acquaintance with all the iron buyers in this market and a thorough knowledge of the business. Address W. J., care MANUFACTURERS' RECORD, Baltimore.

MACHINERY WANTED.—Second-hand 4-4 Looms, Draper, Spooler, Quiller, Warper. Say what make and condition, and give with prices attached. H. G. Hall, Fayetteville, N. C.

A GENTLEMAN who is an expert in the opening and developing of marble and stone quarries, is looking for an opening in the South. Address Harvey, care MANUFACTURERS' RECORD.

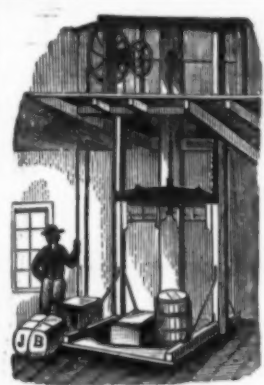
FOR SALE.—A Tin, Galvanized-Iron Cornice, Gas and Plumbing Establishment in one of the largest and most prosperous inland cities in the South. A splendid opportunity. Special reasons. For particulars address S. B. Lowe, Chattanooga, Tenn.

WANTED.—A good location for a saw and planing mill, where timber—poplar, pine and oak—is plenty and stumpage can be had. Address P. Master, Kenton, Obian county, Tenn.

WANTED.—Having just patented a new and useful tool, would like to make arrangements with some hardware manufacturer to make them either on royalty or will sell shoprights. Address T. A. P., Box 13, Plymouth, N. C.

FOR SALE.—A foundry and machine shop now doing a fair business, which can be largely increased by additional capital. Has a lot of good patterns for engines and mills, boiler tools, &c., reason for selling, bad health of the owner. Address B & P, box 33, Staunton, Va.

WANTED.—A situation as manager of a cotton mill by a manufacturer of large experience. Address S. L., care of MANUFACTURERS' RECORD.



Bates' Hand Elevators.
Patented April 14, 1871. Reissued July 25, 1876.
OVER 6,000 IN USE.

Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions, and every place where merchandise, &c., is transferred from one story to another.

JAMES BATES, Patentee,

Nos. 1, 3 & 5 President Street, BALTIMORE.

FOR SALE Cheap!

- 1 30x32x9 ft. Planer, second hand.
- 1 12-inch swing, 4 ft. turn Lathe, second hand.
- 1 Bolt and Pipe Cutter, to 1 1/2 and 1 1/4 inch, second hand.
- 1 Fan for 30-inch Cupola, second hand.
- 1 Lathe, 16-inch swing, 4 ft. centre, second hand.
- 1 Steam Pump, 2 1/2 inch suction and 2 inch disc, second hand.
- 2 Steam Pumps, 1 1/2 inch suction and 1 inch disc, new.
- 1 31-horse power Westinghouse Engine, new.

WM. C. CODD,

Engineers & Machinists' Supplies

306 & 308 Aliceanna street,

BALTIMORE, MD.

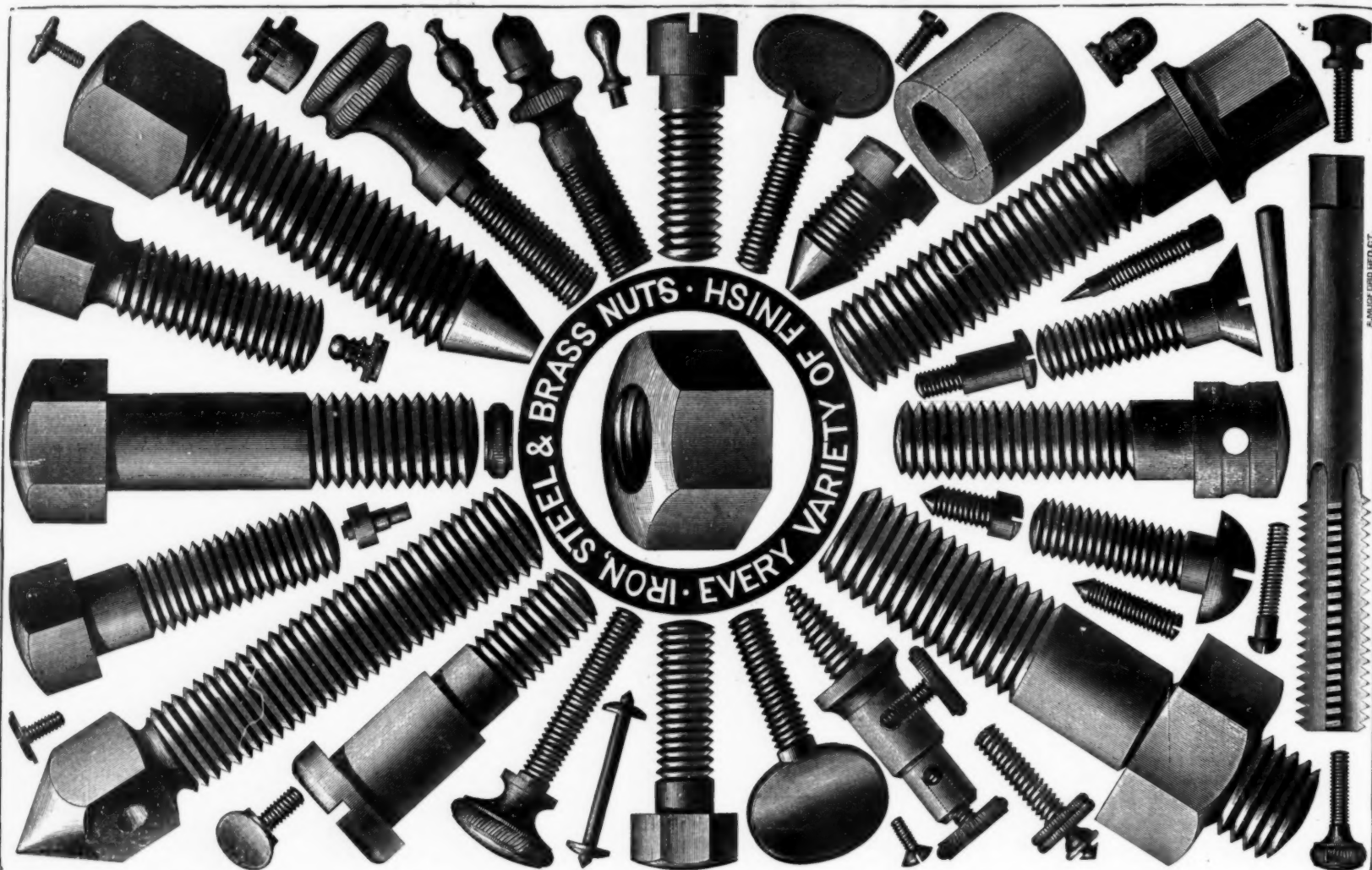
PATENTS
PROCURED.
REJECTED APPLICATIONS
AMENDED & PROSECUTED
INVENTORS DRAWINGS MADE.
NO MODEL REQUIRED HURDLE & STEIGER
TRIBUNE BLDG. N. Y.

AULT & WILBORG
PRINTING INKS.
CINCINNATI.
A & W INK USED ON THIS PUBLICATION.

ENGRAVING DIRECT FROM
NO DRAWING REQUIRED.
NO HAND WORK NECESSARY.
SEND CHEAP, ARTISTIC.
FOR PARTICULARS CROSSCUP & WEST ENG. CO.
702 CHESTNUT ST. PHILA. PA.

OUR CUT OFF ENGINE
A FUEL SAVER
SAW MILL GAUGE
ROLLER
TAYLOR MFG. CO.

JACKSON & TYLER, Agents, Baltimore.



The Hartford Machine Screw Company, Hartford, Conn.

—MANUFACTURERS OF—

Hexagon, Square, Round or Fillister Head Cap Screws, Oval Point and Cupped Point Set Screws, Collar Screws, Hanger Screws, Stud Bolts, Studs and Rolls.

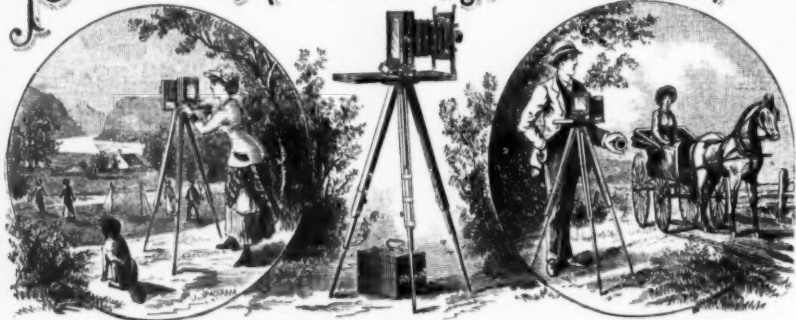
Sewing Machine Screws, Gun Screws, Clock Screws and Trimmings, Piano Screws and Trimmings, Shear, Thumb and Watch Screws, Metal Dowel Pins for Pattern Work, Taper and Straight Pins of all Sizes. Taps and Reamers to match. Telegraph, Electrical and Optical Work. All kinds of Fancy Turned Metal Work. Many of the above varieties we carry in stock.

Small Screw Tools a Specialty.

Cheap Rotary Pumps for Supplying Machine Tools with Oil, Soda Water, &c.

The attention of Model Makers, Machine Builders and Buyers of Machine Screws is called to the fact that we carry in stock a great variety of Milled Machine Screws, including all Standard Sizes, with Taps to match. By Referring to our Stock, much Time and Expense may be saved. PRICES Reasonable. Send for Lists.

PHOTOGRAPHY MADE EASY



AMATEUR EQUIPMENTS IN GREAT VARIETY, FROM \$10 UPWARD.

Sole Proprietors of the Celebrated Novel Cameras.

E. & H. T. Anthony & Co.

Send for Illustrated Catalogue. Forty years established in this line of business. 591 Broadway, New York.

S. W. RITTER, Millwright,

—BUILDER OF—

Flour and Saw Mills, Drug and Chemical Works, Portable Mills, Smut Machines, Mill Stones. Bolting Cloths, Brushes, Guano Fertilizer

Mills, and General Mill Supplies,

261 S. Caroline Street, BALTIMORE, MD.

BRASS!

Roll, Sheet and Platers' Brass,

GERMAN SILVER.

COPPER, BRASS AND GERMAN SILVER WIRE,

BRASS and COPPER TUBING,

BATTERY and PLATERS' SILVER, &c.

PHILIP R. VOGEL, JR.

Manufacturers' Agent.

No. 79 German Street, Baltimore, Md.

GREAT SOUTHERN DESPATCH,

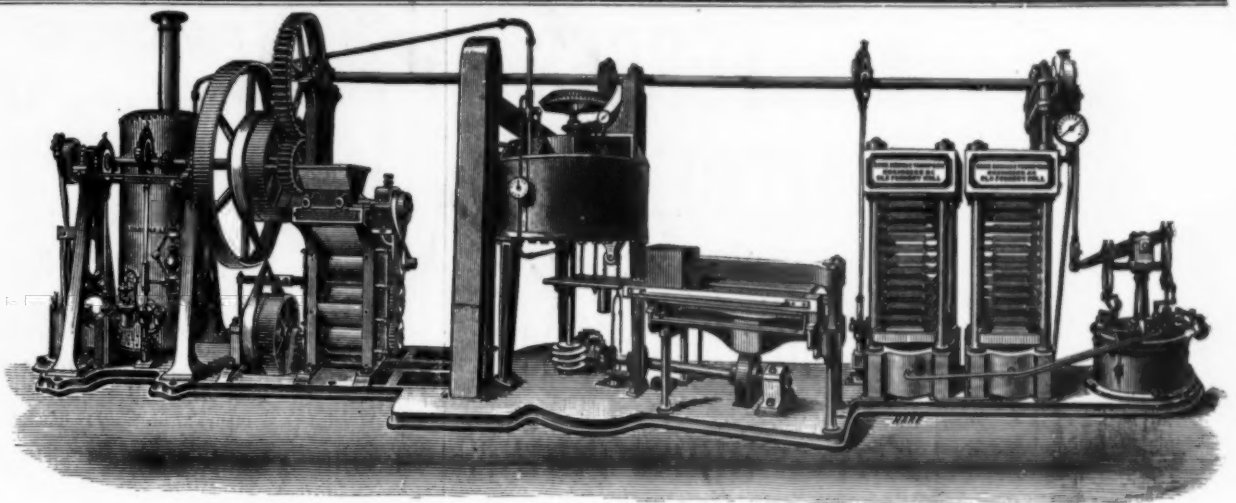
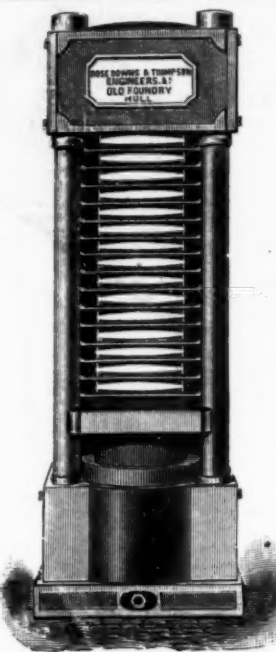
FAST FREIGHT LINE BETWEEN

BALTIMORE AND THE SOUTH AND SOUTHWEST,
Via WESTERN MARYLAND RAILROAD.

For Rates and other information apply to or address:

B. H. Griswold, A. Pope, Gen. E. Agt., D. K. Houck, Sol. Agt. J. H. Geigan & Co., Agts., D. H. Knipple,
O. F. A. W. Md. R. R., Balto. Roanoke, Va. 133 W. Baltimore St. 133 W. Baltimore St. Agt., Hillen St.

Subscribe for "The New South."



REVOLUTION IN
Cotton-Seed Crushing.

UNQUALIFIED SUCCESS OF
ROSE, DOWNS & THOMPSON,
HULL, ENGLAND.

Anglo-American System of Extracting Oil from Cotton Seed,

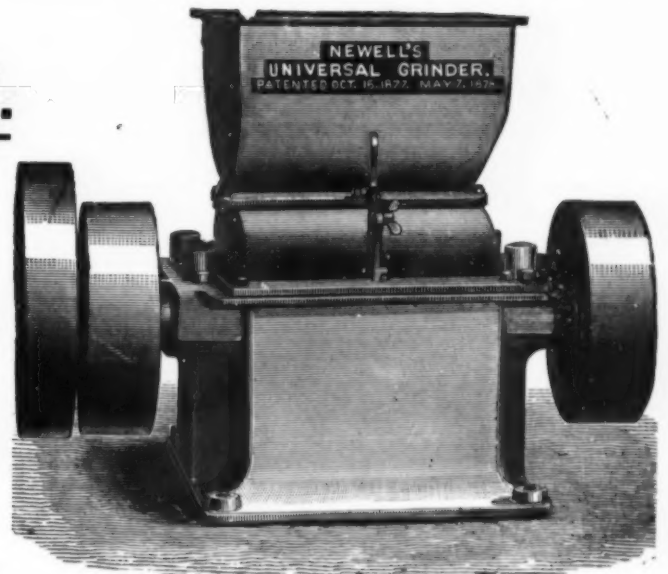
SOLE AGENTS FOR THE UNITED STATES AND CANADA,

The Newell Universal Mill Co.

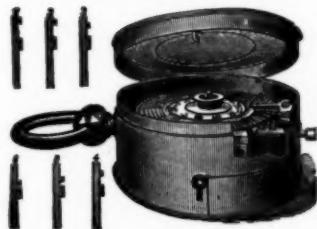
10 BARCLAY STREET, NEW YORK,

Who also manufacture the NEWELL MILL in all its forms and sizes.

A large stock assorted sizes of Engines and Boilers constantly on hand for immediate delivery.



Buerk's Watchman's Time Detector.



—IMPORTANT FOR ALL LARGE CORPORATIONS AND MANUFACTURING CONCERNS.—

Capable of controlling with the utmost accuracy the motion of a watchman or patrolman as the same reaches different stations of his beat. The instrument is complete in itself, portable, and as reliable as the best lever watch. It requires no fixture or wires communicating from room to room, as is the case with ordinary watch clocks.

The Instrument will in all Cases be Warranted Perfect and Satisfactory.

P. O. Box 2470.

J. E. BUERK, Proprietor, No. 230 Washington St., BOSTON, MASS.

MOSHELEY'S CELEBRATED MOLLIS OIL.

It is a splendid lubricator for Stationary Engines, Printing Presses, Paper Mills, Saw Mills, Cotton and Woolen Mills, Spindles, &c. It is the *cheapest and best* Oil for Machinery, Harness, Belts, Boots and Leather generally. Warranted a Water-Proof Leather Preservative. It is penetrating, and renders soft and pliable the hardest leather.

Fire-Proof, Barn, Fence, Bridge and Roof Paint MIXED READY FOR USE.

Our Fire-Proof Barn, Fence, Roof and Bridge PAINT is unsurpassed for painting exposed surfaces, such as Tin, Iron or Wood Roofs, Wagons, Farm Implements, Fences, Barns, Cars, &c., &c. mixed ready for use, will not settle, will be found convenient, saving labor and time, and at the same time is handsome and durable. SOLD IN ALL-SIZED PACKAGES FROM 1 to 50 GALLONS.

Prices Mailed on Application. **HIRSHBERG, HOLLANDER & CO., 195, 197, 217 and 240 W. Pratt St., Baltimore.**

NEW YORK. ♦ CINCINNATI. ♦ SAN FRANCISCO.

AULT & WIBORG,

—MANUFACTURERS OF—

BLACK * AND * COLORED * PRINTING * INKS,

* Lithographic Inks and Varnishes, *

CINCINNATI, OHIO.

Eastern Branch, 21 and 23 Ann Street, - - - NEW YORK.

—R. H. C. VALENTINE, Manager.—

Steam

Wrought-Iron Pipes, Cast-Iron Pipes, Boiler Tubes, Spiral Riveted Wrought-Iron Pipes, Cast-Iron Fittings, Wrought-Iron Fittings, Malleable Iron Fittings, Bent Coils of Wrought-Iron Pipe for Heating, Boiling, &c., Steam Radiators, Brass and Iron Cocks and Valves, Radiator Valves, Openway Valves, Boiler Trimmings, Gauge-Cocks, Steam Gauges, Water Gauges, Steam Whistles, Lubricators, Oil and Tallow Cups, Revolution Counters, Gongs, Steam Boiler Tube Cleaners, Steam Boilers, Kettles, Feed-Water Heaters, Pressure Regulators, Damper Regulators, Steam Traps, Glue Heaters, Injectors, Inspirators, Steam Pumps, Syphon Pumps, Engine Governors, &c.

Contractors for
Steam-Heating Apparatus
of all kinds.

Water

Wrought-Iron Pipes—Plain and Galvanized, Heavy Cast-Iron Pipes, Fittings of all kinds, Cast-Iron Soil Pipe, Green-House Boilers, Pipe and Fittings, Pumps of every description—Steam- or Hand-Power, Fire Hydrants and Valves, Street Main Valves, Foot Valves, Hose Valves, Pipes, Couplings, &c. Bath Boilers, Brass Water-Cocks and Valves in Detail.

Gas

Wrought- and Cast-Iron Pipes, Cast, Wrought, and Malleable Iron Fittings, Brass Fittings, Service and Meter Cocks, Gas Burners, Solder Furnaces, Gas Valves, Street Lamp-Posts and Lanterns, Gas-Fitters' Tools and Sundries.

Tools

Hand and Power Pipe-Cutting and Threading Machines, Pipe Stocks and Dies, Pipe Taps, Drills and Reamers, Machinists' Die-Plates, Machinists' Taps, Solid Bolt Dies, Pipe-Tongs, Adjustable Tongs, Pipe-Wrenches, Monkey-Wrenches, Gas-Fitters' Pliers, Augers, Pipe-Cutters, Pipe Vises, Chisels, Ratchets, Gas-Fitters' Pumps, Boiler Tube Brushes and Cleaners, Boiler Tube Expanders, Hydraulic Punches and Jacks, Patent Hand Hoisting-Machines, Oilers, Hammers, &c.

Correspondence solicited from parties requiring any Goods in the above lines.

MENTION THIS PAPER WHEN YOU ADDRESS US.

McShane & Bell Foundry

Manufacture those celebrated Bells for Tower Clocks, Court-Houses, Cotton Mills, Factories, &c. Prices and catalogues sent free. Address H. McSHANE & CO. Baltimore, Md.

The Gardner Governor.

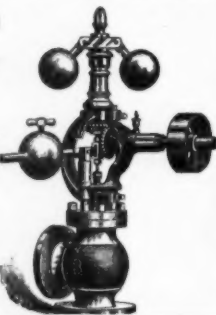
Over 30,000 in Use

Adapted to every style of stationary and portable steam engines.

Warranted to give satisfaction, or no sale. For Circulars and Prices address

The Gardner Governor Co.

QUINCY, ILL.

**Vulcan Works**

BALTIMORE, MD.

All the Tools and Machinery of the above Establishment are offered at private sale. They comprise all the plant of a first-class establishment. Property for sale or lease. Send for catalogue.

H. R. HAZLEHURST.

FORBES LITHO MFG. CO.

181 Devonshire St., Boston.

Lithographers and Printers

BY EVERY KNOWN PROCESS.

DRY GOODS**TICKETS**

Bands, Labels, &c.

FINE COLOR WORK A SPECIALTY.

Galvanized Iron CORNICE.**Architectural Sheet Metal Work.**

Galvanized Iron Gutters made in lengths of 8 feet without a joint. Corrugated Iron Sheds and Buildings.

GEDDES'S PATENT METALLIC SKYLIGHT, OR A SYSTEM OF GLAZING WITHOUT PUTTY.

VENTILATION.—Ventilating Apparatus a Specialty. Correspondence Solicited.

JAS. W. GEDDES & CO.

67 and 69 North St., Baltimore.

OILS

Established 1858.
JAS. B. MACNEAL & CO.

Manufacturers, Jobbers and Dealers in
Burning, Machinery, Tanners
and R. R. Oils,
34 S. Calvert St., Baltimore.
Special quotations on application.

Established 1793.

H. BALDERSTON & SON,
MANUFACTURERS OF

WIRE GRATING FOR WINDOWS

Doors and Office Railing, Wire Screens for Banks, Churches and Store-Fronts. Woven Wire, Wire Tree-Guards, Sieves, Screens for Coal, Sand, &c.

66 S. Calvert Street, Baltimore.

THE FAVORITE

Transfer Steamer "Maryland" Route.

THROUGH PULLMAN CARS FOR

BOSTON

Without Change.

LEAVE CHARLES-ST. DEPOT at 3 P. M. week days; Sundays at 5.40 P. M., arriving in Boston at 7.55 A. M. next day. Ask for Tickets via New York & New England Railroad at Penna. Railroad Ticket Offices.

STEPHENS' VISES.
FLAT and SWIVEL BASES; SOLID JAWS STEEL FACED and SOLID STEEL BARS; ADJUSTABLE ATTACHMENTS.
For Jewelers, Machinists, Car and Locomotive Works and all other Vise Work they maintain their superiority in strength, firmness of grip, durability and make; while affording the greatest economy in time and labor. Special Vises for Amateurs and Wood-Workers. Sold by the Trade. Send for Circular.
MELVIN STEPHENS, Proprietor,
Office, 41 Dey St., NEW YORK.

TOOLS. IMPROVED POWER OR HAND PLANER.

Planes 27 in. long, 12 in. wide, 8 in. high.

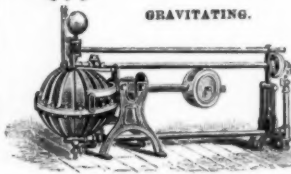
MACHINISTS, ENGINEERS, MODEL MAKERS

and all classes of Mechanics can find TOOLS to suit them at

184 to 188 Washington St.

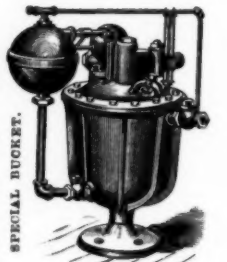
BOSTON, MASS.

A. J. WILKINSON & CO. Catalogues free.

**THE ALBANY STEAM TRAP COMPANY'S SPECIAL BUCKET And GRAVITATING Traps.**

GRAVITATING.

Automatically drain the water of condensation from HEATING COILS, and returns it to the boiler, whether coils are above or below the water level in boiler, doing away with pumps and other mechanical devices for such purposes.



SPECIAL BUCKET.

Also, "Blessing's Patent Renewable Seat Valves."

ALBANY STEAM TRAP COMPANY, Albany, N. Y.

Office and Works, 78 and 80 Church Street.

**Cummer Engine Co.**

CLEVELAND, OHIO.

Awarded Gold Medals and all highest premiums for best Automatic Engine at both Cincinnati and Louisville in 1883.

Printed matter, cuts and information promptly furnished on application. Send for 150 page Illustrated Catalogue.

STUEBNER & WOODS

168 & 170 E. Third St., Hunter's Point
LONG ISLAND CITY, N. Y.

MANUFACTURERS OF

COAL DEALERS AND STEVEDORES' SUPPLIES.

STEEL and IRON COAL TUBS,

Side and Bottom Dumping Cars, Coal and Coke Barrows,

HOISTING BLOCKS, ETC.

Send for Circulars, &c.

**PATENT CLASP PULLEY**

Made in Halves. Same Price as Whole Pulleys.

SHAFTING, HANGERS,

Castings of Every Description Made. Stationary, Distillery, Mill and Boiler Work.

JNO. N. MARQUETTE, 6 W. Falls Ave., Baltimore.

John G. Mengel & Co.

— LEADING —

Type-Founders and Electrotypers

Modern Book, Newspaper, and Job Type cast in a superior Copper-Mixed Metal, and on the new

JUSTIFIABLE SYSTEM OF BODIES.

LARGEST PRINTERS' SUPPLY HOUSE in the SOUTH

Dealers in and Agents for all the leading Cylinder and Job Presses, Paper-Cutters, &c., &c.

Agents for the Celebrated German Printing Inks.

SECOND-HAND MACHINERY Bought, Sold, and Exchanged.

Complete Newspaper and Job Offices Furnished at the Lowest Prices and on good terms.

Send for Specimen Sheets, Estimates, &c., to

31 German Street, Baltimore.

The True Idea of Assurance.

Women's Mutual Insurance and ACCIDENT COMPANY.

PRESIDENT,

ELIZABETH B. PHELPS.

FANNY M. GERARD, Treas.

ELIZABETH S. ROBERTS, Secy.

MEDICAL EXAMINERS.

VICE-PRESIDENT,

MARGARET HOLCOMBE.

CORNELIA KAMPING, Actuary.

ALFRED K. HILLS, M. D., 465 Fifth Avenue.

MARY PUTNAM JACOBI, M. D., 110 W. 34th Street.

JOHN A. KAMPING, Attorney and Counsel, 123 Broadway, New York.

The Company is incorporated under the Laws of New York, approved by the Supreme Court and Superintendent of the Insurance Department, and subject to the latter's supervision.

ITS OBJECT
is surely and cheaply to provide an indemnity for loss by death and accidental disablement.

ITS PLAN

consists in assessing the members ratably according to age in the Life Class, and according to occupation or degree of risk in the Accident Class whenever a loss in either class occurs. In other words, the actual losses only are paid by the policy holders, which thus secures insurance at cost.

ITS MEMBERSHIP

comprises persons between the ages of 16 and 65, of approved physical condition. The Life Class is separate and distinct from the Accident Class, members being liable for losses only occurring in the class to which they belong. This company, having been organized for the purpose of removing the prejudices which created discrimination in Life insurance against women, has adopted the broad principle of no discrimination in membership on account of sex. This Company requires Agents in every city, town and village, to whom liberal terms will be given. Address as above.

ITS SAFETY AND SECURITY
consists in its economical system, its certainty of solvency, (for it incurs no risk but what the members may discharge by one assessment,) and its SECURITY RESERVE FUND, which in time, it is calculated, will make a member's membership self-sustaining.

ITS RATES OF ASSESSMENT

are safer than those adopted by others, and are no more expensive.

FINALLY,

This company confines itself to the legitimate business for which insurance has been accorded protective and encouraging legislation; it proposes to adhere strictly to business principles in its management, and to establish the fullest protection to its members in a manner the simplest, cheapest and most complete of any organization of equal safety. Membership may be acquired by letter. Apply to

ELIZABETH S. ROBERTS, Secretary,

233 Fourth Avenue, New York.



"DIETZ"

No. 2

Fire Place

TUBULAR

HEATING

STOVE.

For Bed, Bath and Sitting Rooms, Offices, Conservatories

EIGHT INCHES OF FLAME.

NO SMOKE OR SMELL.

R. E. DIETZ, 56 Fulton St., New York.

SEEDS

Our Illustrated Catalogue of

Peter Henderson

& Co.,

35 & 37 Cortlandt St.,

New York.

—AND—
PLANTS

For 1885.

"EVERYTHING FOR THE GARDEN," full of valuable cultural directions, containing three colored plates, and embracing everything new and rare in seeds and plants, will be mailed on receipt of stamps to cover postage (5 cents). To customers of last season sent FREE without application.

GRAND HOTEL



BROADWAY and 31st St., NEW YORK.

EUROPEAN PLAN.

HENRY MILFORD SMITH & SON, Proprietors.

ADAMS HOUSE,



BOSTON.

Devon Inn,

Devon, Penna.,

H. J. & G. R. CRUMP.

The Grand Hotel,

Catskill Mountains,

EDW'D A. GILLET.

COLONNADE HOTEL,

Chestnut St. Cor. 15th, one block from New Penna. R. R. Depot,

H. J. & G. R. CRUMP.

E. A. GILLET.

PHILADELPHIA.

Favorite Resorts for all Southern Travel.

ESTABLISHED IN 1847.

Always a Favorite Hotel
For Southern Travel.

REVERE HOUSE,

BOWDOIN SQUARE,

BOSTON, MASS.

Central Location,—near all the principal Business Houses, Theatres, &c. Horse Cars to all parts of the city, and to and from all Railroad Stations pass the door. The house still retains its old-time reputation for excellence of table and service.

BOOTHBY & BROWN, Proprietors.

BAY STATE HOUSE,

WORCESTER, MASS.

W. L. SHEPARD, Proprietor.

This House has been thoroughly repaired and renovated, and will be KEPT STRICTLY FIRST-CLASS IN EVERY RESPECT.

The Only First-Class Hotel in the City.

Rates, \$3.00 and \$3.50 per day.

E.W. BLISS
PRESSES & DIES.
 FINE ENGINE LATHES AND SHAPERS.
SPECIAL MACHINERY FOR TIN & SHEET
METAL WORKERS
 PLYMOUTH, PEARL }
 & JOHN ST'S. } **BROOKLYN, N.Y.**



Barnes' Patent Foot and Steam Power Machinery.

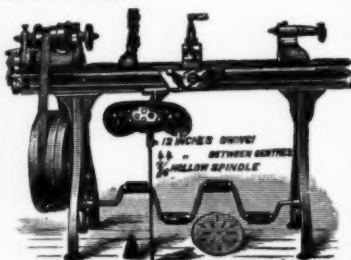
Complete outfit for Actual Workshop Business. Lathes for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortises, Tenoners, &c. Machines sent on trial if desired. DESCRIPTIVE CATALOGUE AND PRICE-LIST FREE.

FOR BUSINESS IN THE WORK SHOP.

Read what our Customers say:

C. C. Hill, M. E., BLACKFOOT, IDAHO: "I sat at the lathe steadily for 11 hours, cutting off and threading 1 1/2 steam pipes. Those who saw the work declared it equal to a 15-hour job in a machine shop. Taken with special regard to the velocipede foot motion, I consider the lathe without an equal. Address,

W. F. & JOHN BARNES,
 No. 221 Ruby Street, ROCKFORD, ILL.



STEEL CASTINGS

FROM 1-4 to 15,000 lbs. WEIGHT.

True to pattern, sound, solid, free from blow-holes, and of unequalled strength. Stronger and more durable than iron forgings in any position or for any service whatever. 20,000 CRANK SHAFTS and 15,000 GEAR WHEELS of this steel now running prove this. CRANK SHAFTS and GEARING specialties. STEEL CASTINGS of every description.

Send for Circulars and Prices to

CHESTER STEEL CASTINGS CO.

Office, 407 Library Street, Philadelphia.

Works, Chester, Pa.

—ISSUES—
 POLICIES OF INSURANCE



A CAREFUL INSPECTION
 OF THE
 BOILERS,

Covering all
 Loss or
 Damage to

Boilers, Buildings & Machinery

ARISING FROM STEAM BOILER EXPLOSIONS.

The Business of the Company Includes All Kinds of Steam Boilers.

Full information concerning the plan of the Company's operations can be obtained at the COMPANY'S OFFICE, Hartford, Conn., or at any agency.

M. ALLEN, Pres't. W. B. FRANKLIN, Vice-Prest. J. B. PIERCE, Sec'y.

—BOARD OF DIRECTORS:—

J. M. ALLEN, President.
 LUCIUS J. HENDEE, President Aetna Fire Insurance Co.
 F. W. CHENEY, Asst. Treas. Cheney Bros. Silk Mfg. Co.
 CHARLES M. BEACH, of Beach & Co.
 DANIEL PHILLIPS, of Adams Express Co.
 G. M. BARTHOLOMEW, Pres't American National Bank.
 R. W. H. JARVIS, Pres't Colt's Fire Arms Mfg. Co.
 THOMAS O. ENDERS, Secretary Aetna Life Insurance Co.
 LEVERETT BRAINARD, of Case, Lockwood & Brainard.

GEN. WM. B. FRANKLIN, Vice-President Colt's Patent Fire Arms Manufacturing Co.
 GEO. CROMPTON, Crompton Loom Works, Worcester.
 WILLIAM ADAMSON, of Baeder, Adamson & Co., Phila.
 HON. THOMAS TALBOT, Ex-Governor of Massachusetts.
 NEWTON CASE, of Case, Lockwood & Brainard, Hartford.
 NELSON HOLLISTER, of State Bank, Hartford.
 CHAS. T. PARRY, of Baldwin Locomotive Works, Phila.
 HON. H. C. ROBINSON, Attorney-at-Law, Hartford.

LAWFORD & McKIM, Agents for Maryland, 10 S. Holliday St., Baltimore, Md.

CAREW'S * PATENT * WIRE * CUTTER.



These goods have recently been greatly improved. They are now made throughout of

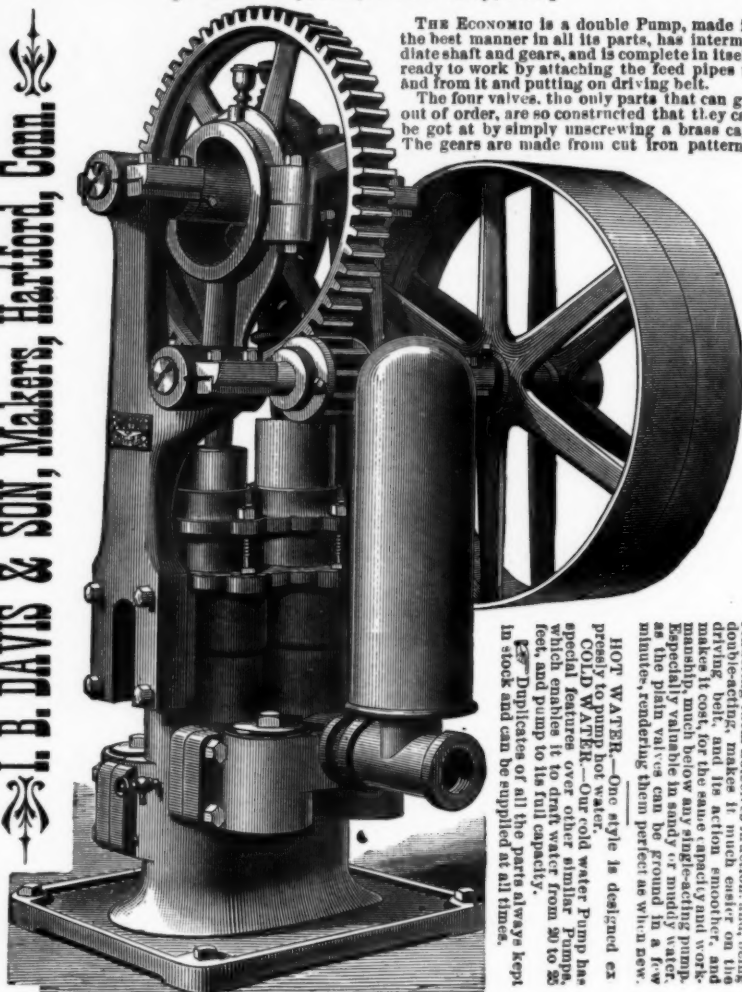
FORGED STEEL.

The advantage of this cutter is seen at a glance. The adjustable jaws are its main feature. These are made of the best tool steel, and are brought to a keen cutting edge before being tempered. The cutting quality is unsurpassed. Whenever they become dulled by use, they can easily be removed, by driving from the end showing price-mark, ground, and as easily replaced. This may be repeated as often as expedient; or they can be replaced by duplicate jaws, thus obviating the necessity of purchasing new cutters. Five sizes 6, 8, 10, 12 and 14 inch.

M. W. ROBINSON, Sole Agent, 79 Chambers St., N.Y.

THE ECONOMIC PATENT Boiler Feed Pump

[Patented May, 1879, and February, 1883.]



THE ECONOMIC is a double Pump, made in the best manner in all its parts, has intermediate shaft and gears, and is complete in itself, ready to work by attaching the feed pipes to and from it and putting on driving belt.

The four valves, the only parts that can get out of order, are so constructed that they can be got at by simply unscrewing a brass cap. The gears are made from cut iron patterns,

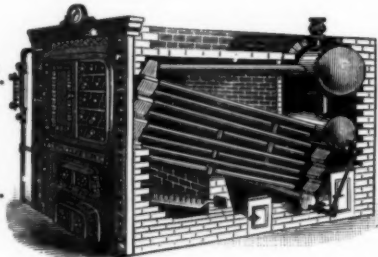
rendering them noiseless in action, and, being double-acting, makes it much easier on the driving belt, and its action smoother, and makes it cost, for the same capacity and workmanship, much below any single-acting pump. Especially valuable in sandy or muddy water, as the plain valves can be ground in a few minutes, rendering them perfect as when new.

NOTE.—Every one of our Cold Water Pumps is tested on a lift of 25 feet.

L. B. DAVIS & SON, Makers, Hartford, Conn.

Zell's Safety Water Tube Boiler.

Over 2,000 H. P.
 sold in the first
 six months.
 Send for Circulars.

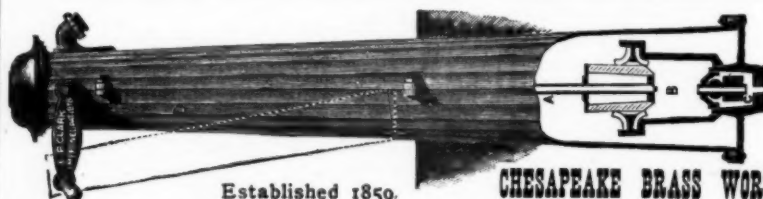


Economy
 Unexcelled,
 Durability
 Guaranteed.

POSITIVELY WILL NOT EXPLODE.

PIONEER IRON WORKS,
 Manufacturers,

**KING AND WILLIAM STREETS,
 BROOKLYN, N. Y.**



Established 1859.

CHESAPEAKE BRASS WORKS.

L. P. CLARK & SONS, 34 N. Holliday St., BALTIMORE.



ESTABLISHED 1845.

The Oldest Saw Manufactory in the South.

TOLAND & SON, 85 N. Front St., Baltimore.

Particular attention paid to Large Circular Work. We warrant our Small Circular Saws to stand more strain, without buckling or cracking, than any other make. We make all kinds of Saws,—Ensilage, Feed, Meat Choppers, and other knives made to pattern, warranted equal to the Best Forged Knives, and CHEAPER.

N. B. We make no charge for hammering any Large Circular Saw that we can't make "go."

—GIVE US A TRIAL—

PHOSPHOR-BRONZE

The celebrated alloys in Wire, Rods, Sheets, Bolts, Wire Ropes, Wire Cloth, Castings, Ingots, etc. Pamphlets and particulars on application to

THE PHOSPHOR-BRONZE SMELTING CO., Limited.

No. 512 ARCH STREET, PHILADELPHIA, PA.

Owners of the U. S. Phosphor-Bronze Patents. Sole Manufacturers of Phosphor-Bronze in the United States.

—JOHN MERRY—

WEST SIDE GALVANIZING WORKS,

535 to 547 West 15th Street, New York.

—MANUFACTURER OF—

The "LION" and "PHENIX" Brands of Galvanized Sheet Iron.

Corrugated Iron for Roofing or Siding, Tin Plates, Solder, Slating and Roofing Nails, Tinned Galvanized and Black. All kinds of Iron work Galvanized or Tinned to order.



ANTI-FRICTION Roller Detachable Chain Belting.

Especially adapted for the rapid and economical handling of CLAY, TILE, LIME, PLASTER, CEMENTS, BROKEN STONE, COAL, ORES, SAND, DRY and WET TAN, SAW DUST, SLABS, PULP, GRAIN, FLOUR, ICE, &c., &c., &c. For ELEVATORS, CARRIERS, CONVEYERS, &c., &c. Propelling STEAMBOATS and for other DRIVING PURPOSES.

MANUFACTURED AND SOLD BY THE

Lechner Manf'g Co.

COLUMBUS, OHIO.

Send for Illustrated Catalogue.

Union File Co.

311 to 315 North St., Baltimore, Md.

MANUFACTURERS OF

FILES & RASPS

Made from the Best Refined Cast Steel.

With the requisite facilities to produce a first-class article, we are enabled to offer Files that will give entire satisfaction.

MORITZ & KEIDEL, Agents, 48 & 50 German Street, Baltimore, Md.

Business Established 1832 (on Present Premises.) The Oldest House in the Trade.

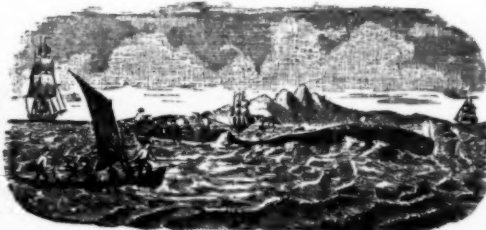
WM. C. ROBINSON & SON,

81 SOUTH ST., BALTIMORE, MD.

MANUFACTURERS OF

AND

Wholesale Dealers in

OILS!

Specialties—Oils for Cotton and Woolen Mills, Railways, Tanners' and Machinery Use.

We always have in stock OILS for every known purpose. Agents for Downer's Spindle, Champion and Mineral Spindle, Meriam & Morgan Paraffine Co's Paraffine, and Williams' Odorless Lubriphene OILS.

THE NEW PULSOMETER

The cheapest, strongest, most simple, compact, durable, effective and economical STEAM PUMP IN THE MARKET.

For raising liquids under and up to 100 feet. No Machinery, No Oil, No Special Care. Can be worked suspended by a chain. Will pass grit, mud, sand, pulp, etc., without injury to its parts. Needs only a steam pipe from boiler to run it. Price, 600 gallons per hour, \$50; 1,200 do. \$75; 3,600 do. \$100; 6,000 do. \$150; 10,000 do. \$175; 18,000 do. \$225; 25,000 do. \$275; 45,000 do. \$400; 60,000 do. \$500; 120,000 do. \$1.00. Compare this with any other Pump List.

Write for illustrated descriptive book with testimonials, &c. Mailed free.

PULSOMETER STEAM PUMP CO., 83 John St., New York City, U. S. A.

CINCINNATI CORRUGATING CO.

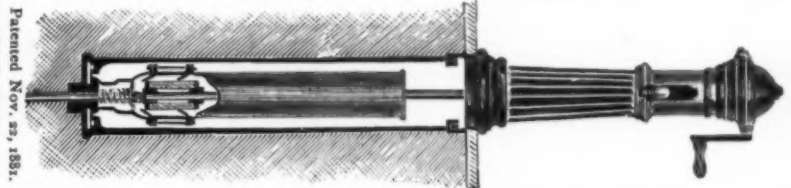
—SUPERIOR—

Corrugated Iron Roofing, Siding, Ceiling, Arches, Laths.

GREATEST ECONOMY, DURABILITY, EFFECTIVENESS.

Send for our New Illustrated Catalogue.

CINCINNATI, OHIO.

**W. J. CLARK & BRO., MANUFACTURERS OF HYDRANTS**

These Hydrants are made of the best material, and are guaranteed to be entirely non-wasting and non-freezing. The works of these Hydrants can be taken out and repaired without breaking the ground. Send for circular. No. 38 N. Holliday Street, BALTIMORE, MD.

METALLIC SHINGLES.

\$5.50 per square

ANGLO-AMERICAN ROOFING CO.
22 Cliff Street, New York

Established a Quarter of a Century in the Manufacture of the Celebrated MILLER SAFES.

L. H. MILLER,

SAFE AND IRON WORKS,
BALTIMORE, MD

Sole Manufacturer of

Miller's Patent Fire & Burglar Proof Safes,
BANK VAULTS, DOORS AND LOCKS.

PRINCIPAL OFFICE, 252 W. BALTIMORE ST.

[NEAR HANOVER.]

Factory—Square bounded by Warner, Claret, Henrietta and Fremont Sts., South Baltimore.

JOHN R. EDWARDS, Blank Book Manufacturer,

LITHOGRAPHER, PRINTER AND STATIONER,

167, 169 AND 171 W. LOMBARD ST. COR. SHARP ST.

BALTIMORE, MD.

Specialty: Account Books to order for Manufacturing Establishments, Banks and Insurance Companies. Estimates Furnished.

Charles Webster, Pres. S. M. Burnham, Sec'y.
J. S. Lane, Supl. W. T. Allen, Treas.

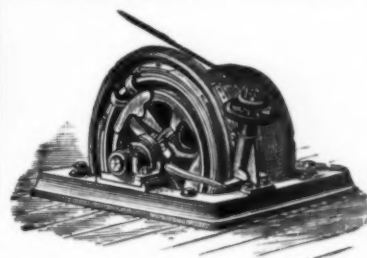
WEBSTER, CAMP & LANE MACHINE CO.

140 Main St., Akron, O.

BAND FRICTION HOIST

For Mines and Blast Furnaces.

The SAFEST, SIMPLEST, STRONGEST and BEST in the Market. Engines, Boilers, Pumps, Skips, and everything pertaining to a first-class plant of Hoisting Machinery. Correspondence solicited.



ALWAYS ASK FOR

ESTERBROOK'S
CELEBRATED
STEEL PENS.

PENS

LEADING NUMBERS:

048, 14, 130, 333, 135, 161

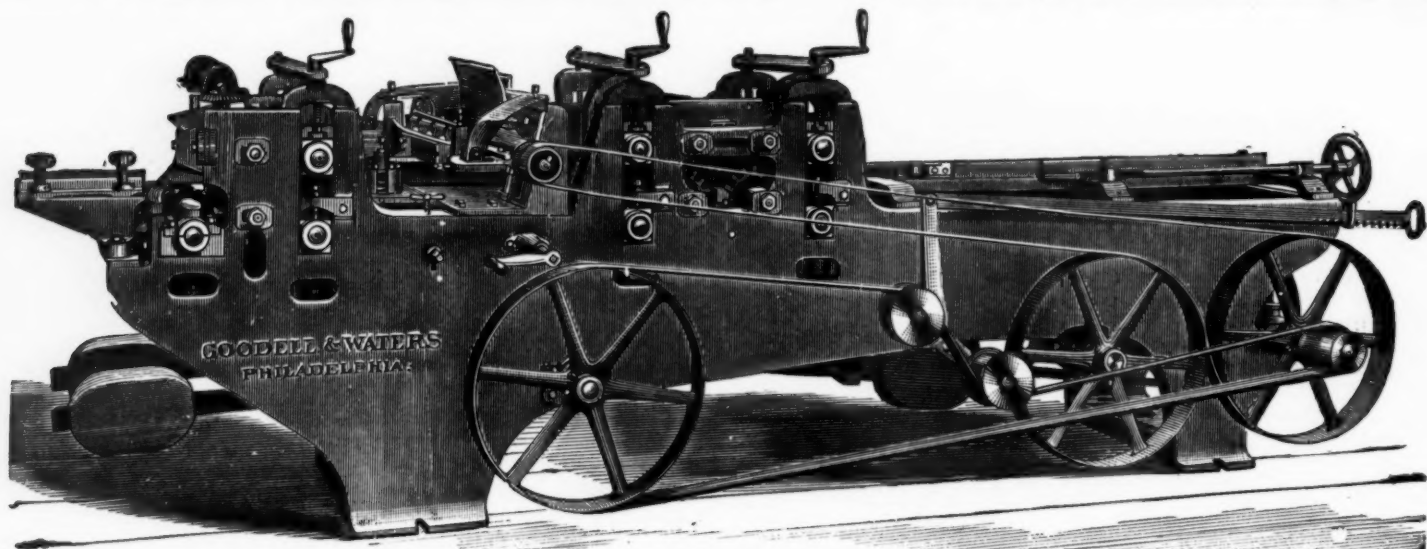
For Sale by all Stationers.

The Esterbrook Steel Pen Co.

26 John Street, New York

GOVERNORS For Water Wheels } Cohoes Iron Foundry & Mch. Co.
Send for Catalogue. Cohoes, N. Y.

WOOD-WORKING MACHINERY



— SEND FOR CIRCULARS. —

For PLANING * MILLS, RAILROAD * SHOPS, CAR * BUILDERS,

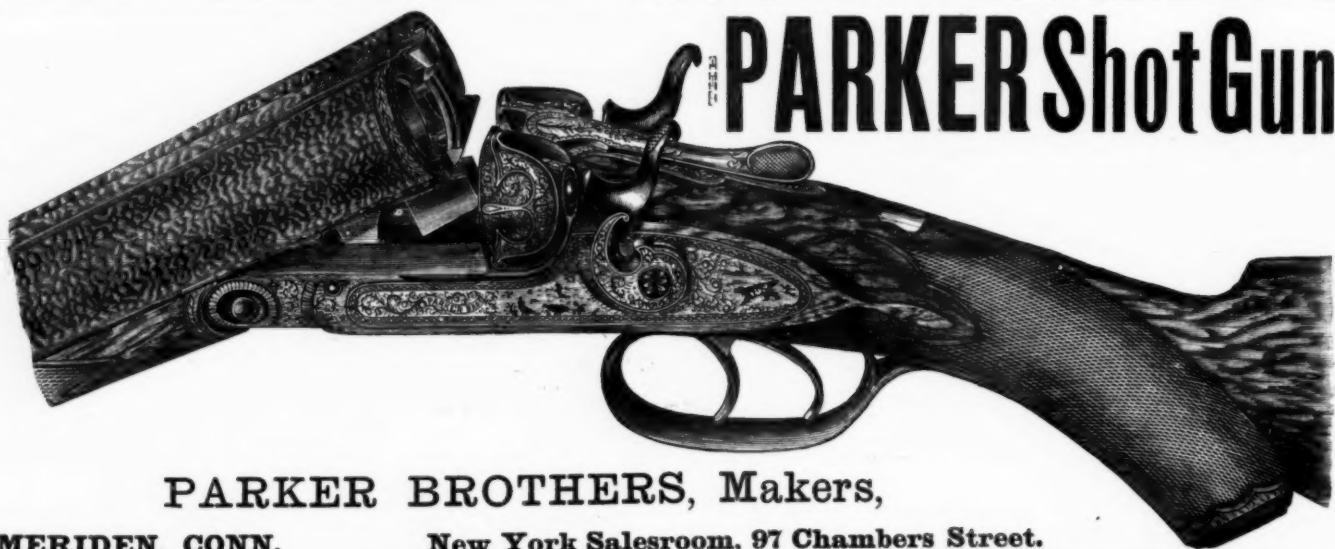
* CABINET, CARRIAGE, SASH, DOOR AND BLIND MAKERS, *

GOODELL & WATERS,

Corner 31st and Chestnut Streets, Philadelphia, Pa.

CUMBERLAND DUGAN & CO., 26 S. Charles St., Baltimore, Southern Agents.

Report of the International Gun Trial, held at Bergen Point, N. J., April 3, 1884. Extract from *Turf, Field and Farm* reporting the same: "The Parker Gun, our prominent home manufacture, won the admiration of all by its fine shooting qualities. It registered in both the 10 and 12-bore classes; the greatest number of pellets in the 30-inch circle, and therefore must be awarded the palm for pattern."



PARKER BROTHERS, Makers,

MERIDEN, CONN.

New York Salesroom, 97 Chambers Street.

BILLINGS' PATENT BREECH-LOADING SINGLE BARREL SHOT GUN.

Provided with Close Shooting Detachable Muzzle for contracting the shot.



Uses the "A" Brass or Paper Shells.

MANUFACTURED AND FOR SALE BY

THE BILLINGS & SPENCER CO.,
HARTFORD, CONN.

ALWAYS USE THE BEST.

This Belt is stitched in seams one inch apart before putting on the outside Rubber Cover, which is made SEAMLESS and therefore cannot split. For endless Belt it is the ACME of PERFECTION, as the splice cannot separate. First cost somewhat more than the cheap Belts generally sold, but well worth the difference. Send for price-list and samples of Belts.

CHEAPEST in the END.



GIANT GUM BELTING.

REUTER & MALLORY,

— DEALERS IN —

MANUFACTURERS' SUPPLIES,

22 Light St., BALTIMORE.

W. S. EATON, Treasurer.

J. C. CONVERSE, President.

National Tube Works Comp'y

BOSTON:

NEW YORK:

CHICAGO:

ST. LOUIS:

8 PEMBERTON SQUARE.

104 JOHN STREET

CLINTON and FULTON STS.

802 N. 2d STREET.

MANUFACTURERS OF

Lap-Welded
WROUGHT IRON PIPE

1/8 inch to 16 inches diameter.

Oil Well Tubing and Casing.

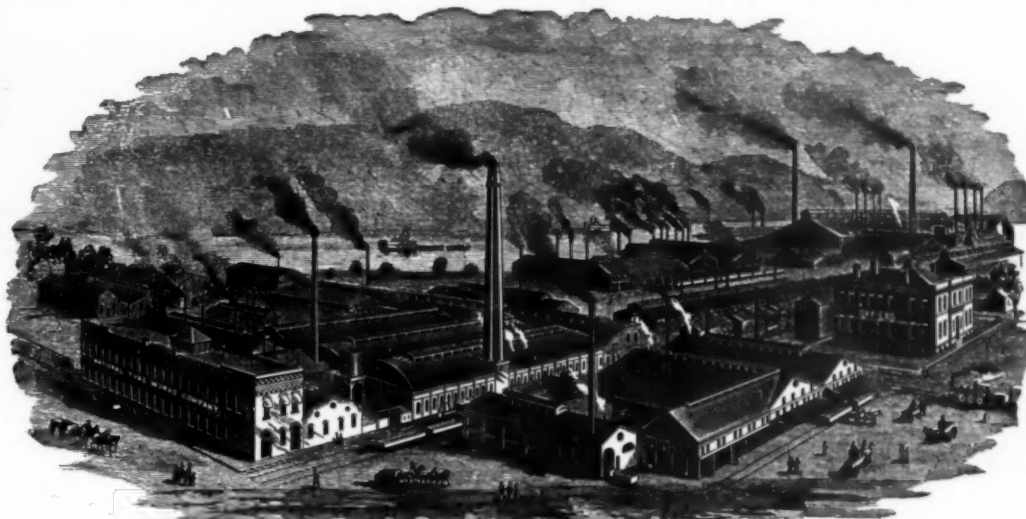
Indestructible Pipe

—FOR—

Mines and Salt Wells.

Steam and

Gas Pipe.



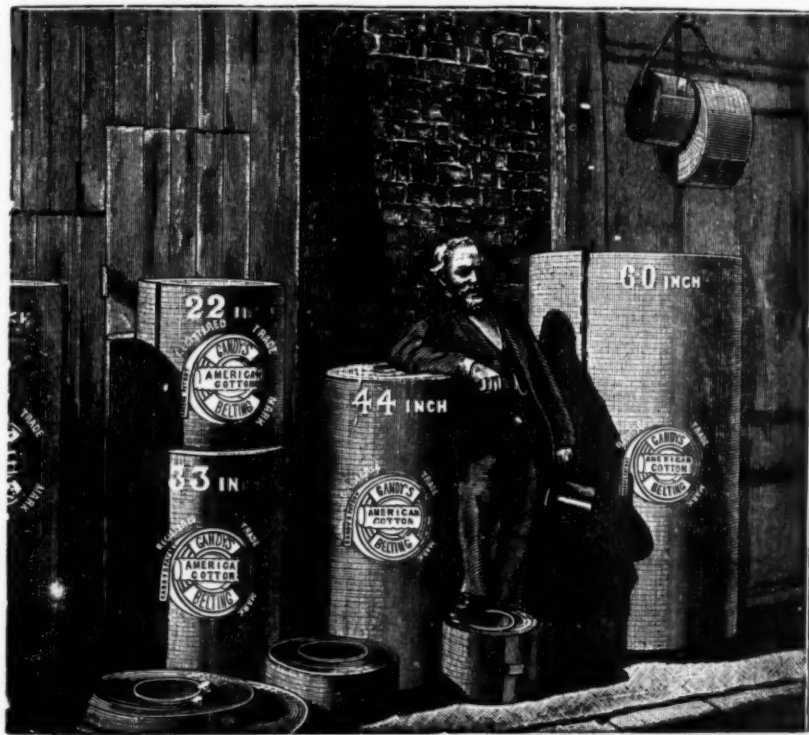
[WORKS AT M'KEESPORT, PENNA.]

STANDARD
Lap-Welded
Boiler Tubes.
SEMI-STEEL TUBES
—FOR—
LOCOMOTIVES.
Kalamain Tubes
WHICH WILL NOT RUST.
Mack's Injector
the best thing to feed Boilers with
HOT WATER.

Patent Water Pipe with Patent Converse Joints

— LIGHT, STRONG AND INDESTRUCTIBLE. —

A VAST IMPROVEMENT ON CAST IRON PIPE.



SILVER MEDAL AWARDED AT THE "NATIONAL EXPOSITION OF RAILWAY
APPLIANCES," CHICAGO, JUNE, 1883.

GANDY'S PATENT

— AWARDED MEDALS AT —

Berlin.....1879.
Hamburg.....1878.
Sydney.....1879.

New Zealand.....1882.
Cincinnati.....1879.
New York.....1880.

MACHINE BELTING

Made Perfectly Straight and any Length without Joints.

For Main Driving it is the Best.

— Much Cheaper than Leather. —

— MANUFACTURED BY —

THE GANDY BELTING CO.

BALTIMORE, MD.

CUPOLA
POLISHING
FRAME.

Union Stone Com'y

38 and 40 HAWLEY ST., BOSTON, MASS.

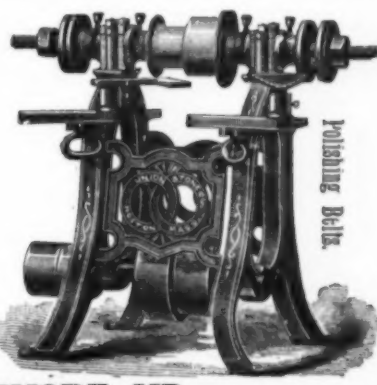
PATENTEES AND MANUFACTURERS OF THE

UNION EMERY WHEEL.

Emery Wheel Machinery and Tools a Specialty.

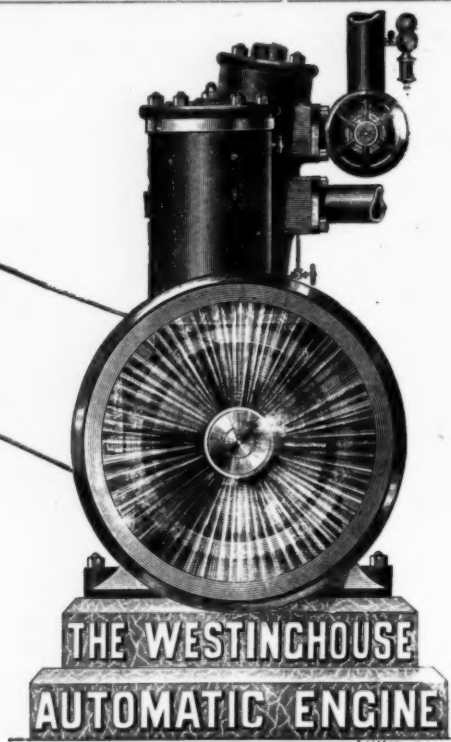
Automatic Knife-Grinding Machines, Wood-Polishing Wheels, Emery, Quartz, Corundum,
Grinders and Polishers' Supplies. Catalogue on application.

JACKSON & TYLER, Agents, 16 and 18 S. Howard Street, BALTIMORE, MD.



Polishing Belt.

1,000 ENGINES NOW IN USE!



30,000 Horse Power now Running!

SALES, 2,000 H. P. per Month.

SEND FOR ILLUSTRATED CIRCULAR AND REFERENCE LIST.

THE

Westinghouse Machine Co., Pittsburgh, Pa.

SALES DEPARTMENT CONDUCTED BY

Westinghouse, Church, Kerr & Co., 17 Cortlandt Street, New York.
 Fairbanks, Morse & Co., Chicago, Cincinnati, Cleveland, Louisville and
 St. Paul. Fairbanks & Co., St. Louis, Indianapolis and Denver.
 Parke & Lacy, San Francisco and Portland, Oregon. Parke,
 Lacy & Co., Salt Lake City, Utah. Imray, Hirsch & Kaepfel,
 Sidney and Melbourne, Australia.

ROBT. WETHERILL & CO.
 CHESTER, PA.

ESTABLISHED 1872.

Corliss Engine

BUILDERS.

Condensing, Non-Condensing,
 Compound.
 Great Economy, Durability,
 Close Regulation.

BOILERS,
 Shafting and Gearing.

CORLISS PUMPING ENGINES,

—CITY WATER WORKS.—



Chapman Valve Mfg. Co.

MANUFACTURERS OF

STEAM, GAS AND WATER
 Valves and Gates.
 Fire Hydrants

With or Without INDEPENDENT VALVES.

General Office and Works,

INDIAN ORCHARD, MASS

Treasurer's Office,

Mason Building, 72 Kilby and 112 Milk Sts., Boston.

ALL WORK GUARANTEED.

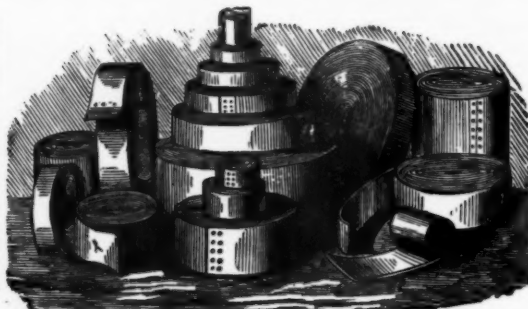
Send for Descriptive Circulars and Price-List. Correspondence solicited.

BALTIMORE BELT CO.

MANUFACTURERS OF

Pure Oak-Tanned Leather Belting.

SOLE AGENTS FOR
 T. K. Earle Mfg. Co.'s Card Clothing,
 AND DEALERS IN
 RUBBER and COTTON BELTING.



DEALERS IN
 Cotton and Woollen Mill Supplies,
 No. 38 S. Charles Street,
 BALTIMORE.

—ESTABLISHED

1774.—

FLOURING



MILLS.

BUHRS 1774.

ROLLS 1882.

This Company owns and operates three Mills, as follows:

Patapsco Mill A, Ellicott City, Md.

Patapsco Mill B, Baltimore, Md.

Patapsco Mill C, Orange Grove, Md.

—Having a daily capacity of 1,500 barrels.—

The value of Flour depends on the proportionate quantity of Gluten, Starch, Sugar and Phosphate
 of Lime Maryland and Virginia Wheat, from which our Patent Roller Flours are manufactured, is un-
 equalled for its purity and superior quality of alible properties.

ASK YOUR GROCER FOR

Patapsco Superlative Patent. Patapsco Choice Patent. Patapsco Family. Cape Henry Family.

Patapsco Extra. North Point Family. Chesapeake Extra. Bedford Family. Orange Grove Extra

C. A. GAMBRILL MFG CO.

Office, 32 Commerce St., Baltimore, Md.

"CAMARET" ROOFING.

THE sale of nearly 20,000 boxes of "CAMARET" Brand of Roofing
 Plates in the past year by this house, is sufficient evidence of the appre-
 ciation of the quality of this plate. We now guarantee every sheet in a box
 of "CAMARET" to stand any test of bending required—to be well assorted—
 to be free from wasters—or boxes to be held subject to our order.

The Palm Oil Coating renders it less liable to rust than any plate in the
 market except extra coated plates. We are the direct importers of the
 "CAMARET" Brand from the Makers, and carry a full stock of IC 14x20,
 IX 14x20, IC 20x28, IX 20x28.

Our prices will be made low. Samples sent on application.

MERCHANT & CO.

Importers of Tin and Terne Plates,

90 Beekman St., New York, N. Y.

525 Arch St., Philadelphia, Pa.

Buffalo Shaving and Ventilating

EXHAUST * FANS.

SATISFACTION GUARANTEED
 In * Every * Instance.

SEND FOR CATALOGUE AND
 —PRICE-LIST.—

Buffalo Forge Co.

490 * BROADWAY, * BUFFALO, * N. * Y. *